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ABSTRACT

This outline of instruction and student guide for a postsecondary level course for instructors is one of a number of military-developed curriculum packages selected for adaptation to instruction and curriculum development in a civilian setting. The course is designed to provide the neccesary information that the student will need in planning and writing lesson topic guides, instructing group-paced practice teaching lessons, developing and writing criterion tests, participating in practice counseling sessions, and evaluating other student instructors in group-paced teaching lessons. It consists of twenty-seven lessons covering 116 hours of instruction. Teacher materials include an outline of instruction detailing instructional materials, terminal objectives, enabling objectives, criterion testing, lesson content, and homework assignments. The student guide provides information sheets for most lessons taught. The text, A Manual for Navy Instructors, provides an introduction and guidance to the Navy's systems approach to training activities for planning, conducting and evaluating instruction, with emphasis on the role of the instructor as a manager of learning. Self-tests and test problems conclude most of the nine chapters. (YLB)

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This military technical training course has been selected and adapted by The Center for Vocational Education for "Trial Implementation of a Model System to Provide Military Curriculum Materials for Use in Vocational and Technical Education," a project sponsored by the Bureau of Occupational and Adult Education, U.S. Department of Health, Education, and Welfare.

MILITARY CURRICULUM MATERIALS

The military-developed curriculum materials in this course package were selected by the National Center for Research in Vocational Education Military Curriculum Project for dissemination to the six regional Curriculum Coordination Centers and other instructional materials agencies. The purpose of disseminating these courses was to make curriculum materials developed by the military more accessible to vocational educators in the civilian setting.

The course materials were acquired, evaluated by project staff and practitioners in the field, and prepared for dissemination. Materials which were specific to the military were deleted, copyrighted materials were either omitted or approval for their use was obtained. These course packages contain curriculum resource materials which can be adapted to support vocational instruction and curriculum development.

The National Center Mission Statement

The National Center for Research in Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The National Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Installing educational programs and products
- Operating information systems and services
- Conducting leadership development and training programs

FOR FURTHER INFORMATION ABOUT
Military Curriculum Materials
WRITE OR CALL
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The National Center for Research in Vocational Education
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Military Curriculum Materials for Vocational and Technical Education

Information and Field Services Division

The National Center for Research in Vocational Education

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Military Curriculum Materials Dissemination Is . . .

an activity to increase the accessibility of military-developed curriculum materials to vocational and technical educators.

This project, funded by the U.S. Office of Education, includes the identification and acquisition of curriculum materials in print form from the Coast Guard, Air Force, Army, Marine Corps and Navy.

Access to military curriculum materials is provided through a "Joint Memorandum of Understanding" between the U.S. Office of Education and the Department of Defense.

The acquired materials are reviewed by staff and subject matter specialists, and courses deemed applicable to vocational and technical education are selected for dissemination.

The National Center for Research in Vocational Education is the U.S. Office of Education's designated representative to acquire the materials and conduct the project activities.

Project Staff:

Wesley E. Budke, Ph.D., Director
National Center Clearinghouse

Shirley A. Chase, Ph.D.
Project Director

What Materials Are Available?

One hundred twenty courses on microfiche (thirteen in paper form) and descriptions of each have been provided to the vocational Curriculum Coordination Centers and other instructional materials agencies for dissemination.

Course materials include programmed instruction, curriculum outlines, instructor guides, student workbooks and technical manuals.

The 120 courses represent the following sixteen vocational subject areas:

- Agriculture
- Aviation
- Building & Construction Trades
- Clerical Occupations
- Communications
- Drafting
- Electronics
- Engine Mechanics
- Food Service
- Health
- Heating & Air Conditioning
- Machine Shop
- Management & Supervision
- Meteorology & Navigation
- Photography
- Public Service

The number of courses and the subject areas represented will expand as additional materials with application to vocational and technical education are identified and selected for dissemination.

How Can These Materials Be Obtained?

Contact the Curriculum Coordination Center in your region for information on obtaining materials (e.g., availability and cost). They will respond to your request directly or refer you to an instructional materials agency closer to you.

CURRICULUM COORDINATION CENTERS

EAST CENTRAL
Rebecca S. Douglass
Director
100 North First Street
Springfield, IL 62777
217/782-0759

MIDWEST
Robert Patton
Director
1515 West Sixth Ave.
Stillwater, OK 74704
405/377-2000

NORTHEAST
Joseph F. Kelly, Ph.D.
Director
225 West State Street
Trenton, NJ 08625
609/292-6562

NORTHWEST
William Daniels
Director
Building 17
Airdustrial Park
Olympia, WA 98504
206/753-0879

SOUTHEAST
James F. Shill, Ph.D.
Director
Mississippi State University
Drawer DX
Mississippi State, MS 39762
601/325-2510

WESTERN
Lawrence F. H. Zane, Ph.D.
Director
1776 University Ave.
Honolulu, HI 96822
808/948-7834

INSTRUCTOR BASIC COURSE

Classroom Course 12-6

Developed by:
United States Navy

Development and Review Dates:
August 1979

Occupational Area:
Instruction

Target Audiences:
Grades 13 - Adult

Print Pages:
914

Availability:
Vocational Curriculum
Coordination Centers

Contents:	Type of Materials:						Instructional Design:				Type of Instruction:	
	Lesson Plans:	Programmed Text:	Student Workbook:	Handouts:	Text Materials:	Audio-Visuals:	Performance Objectives:	Tests:	Review Exercises:	Additional Materials Required:	Group Instruction:	Individualized:
Unit 1.0 -												
Instructional Planning and Implementation	•	•			•	X	•	•	•	X		•

X Materials are recommended but not provided.

THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION

OSU
The Ohio State University

1960 Kenny Road
Columbus, Ohio 43210
(614) 486-3655

2 INSTRUCTOR BASIC COURSE
A-012-0011

Course Description:

This course is designed to provide the necessary information that the student will need in planning and writing lesson topic guides, instructing group-paced practice teaching lessons, developing and writing criterion tests, participating in practice counseling sessions, and evaluating other student instructors in group-paced teaching lessons. The course consists of 27 lessons covering 116 hours of instruction. The following topics are presented:

Student Self-Introduction
Effective Communication
The Navy Training Program
Learning Objectives
Theories/Laws of Learning
Lesson #1 Requirements (20-Minute Knowledge)
Learning Objective Analysis (Knowledge)
Lesson Topic Guide Elements/Formats
Lesson Topic Guide Annotation
The Effective Instructor
Student Motivation
Oral Questions and Questioning Techniques
Instruction Media (Chalkboard/Visual Aid Panel)
Methods/Techniques of Instruction (Knowledge)
Five-Minute Presentations
Measuring Instructional Intent
Test Item Construction
Student Factors Affecting Learning
Evaluation of Instruction
Instructional Media (Training Aids)
Lesson #2 Requirements (30-Minute Knowledge)
Learning Objective Analysis
Methods/Techniques of Instruction (Skill)
Lesson #3 Requirements (30-Minute Skill)
Guidance/Counseling
Lesson #4 Requirements (30-Minute Skill)

The course contains both student and teacher materials. Teacher materials include an outline of instruction detailing instructional materials, terminal objectives, enabling objectives, criterion testing, and homework assignments. A programmed text with review exercises and a student guide are included for the student. Please note that Lesson Topic 1.1 has been omitted because of military specific materials.

INSTRUCTOR BASIC COURSE
A-012-0011

CLASSROOM COURSE

TABLE OF CONTENTS

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Outline of Instruction: Lesson Topics 1.11 - 1.20	185
Outline of Instruction: Lesson Topics 1.21 - 1.27	427
Student Guide	580
A Manual for Navy Instructors	846

Please note that Lesson Topic 1.1 has been omitted because of military specific materials.

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.2 STUDENT SELF-INTRODUCTION

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 0.0 PERIODS
Lab 2.0 PERIODS

INSTRUCTIONAL MATERIALS:

Instructional References:

1. None

Instructional Aids:

None

Text:

Student Guide pp. 1.2.1.1-1.2.1.2

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.2.1 In a classroom situation and permitted use of any appropriate notes, PRESENT a Two-Minute self introduction to relate personal background information and/or future goals to his/her classmates. The presentation will be commented on by a staff instructor as to following elements:

a. Voice volume
b. Voice clarity
c. Posture
d. Gestures

CRITERION TEST: Execute Learning Objective 1.2.1

HOMEWORK: None

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson overview a. Lesson Topic; STUDENT SELF-INTRODUCTION	State and Display on Chalkboard/VAP	
b. Major Teaching Points:		
(1) Structuring the Introduction		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
II. PRESENTATION		
A. Structuring the Introduction	Refer students to information sheet 1.2.1I.	
1. Introduction will reflect an introduction of yourself to your classmates.		
2. Suggested points to cover		
a. Name and Rate		
b. Personal background		
c. Past duty stations		
d. Education background		
e. Hobbies		
f. Personal goals		
3. Introduction must include a brief statement of what you, expect to gain from Instructor Training and your tour as an instructor.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. Preparing the talk		
a. Prepare a set of brief notes		
(1) Points you wish to bring out		
(2) Dates, numbers, etc.		
b. Organize notes in a logical sequence.		
5. Giving your talk		
a. Write name and rate on chalkboard/VAP.		
b. State your name and rate to class		
c. Give your talk in a natural, conversational manner using your notes as a guide only.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Refer to notes as frequently as required but avoid reading the notes to the class.		
d. Finish talk in approximately two minutes.		
6. The following areas will be observed by a staff instructor.		
a. Voice volume		
b. Voice clarity		
c. Posture	Give self-introduction to start things off. Have teaching partner follow.	
d. Gestures		
III. SUMMARY		
A. State the lesson objectives	Turn to cover page and read the lesson objectives.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
B. Teaching points	Summarize the teaching point.	
1. Structuring the introduction		
IV. APPLICATION		
NONE		
V. EVALUATION	Divide class into groups for student self-introductions.	Execute the learning objective 1.2.1
A. Have students execute Learning Objective 1.2.1.	Critique the student introductions and comment where necessary.	
VI. ASSIGNMENT		
NONE		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE
A-012-0011

LESSON TOPIC: 1.3 EFFECTIVE COMMUNICATIONS

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 2.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. Haney, William L., Communication and Organizational Behavior, 3rd Edition, chap. 16.
2. Nichols, R., Are You Listening?
3. Air Force Manual 50-62, Principles and Techniques of Instruction, chaps. 6 & 7.
4. NAVEDTRA 007-01-69-76, Navy Career Counselor 1 & C, Vol. I, Chap. 3

Instructional Aids:

Training Equipment:

1. Cassette Audio Tapeplayer (optional)
2. Audio Tape "Listening Habits" (Optional)

Text:

1. Student Guide pp. 1.3.1.1 - 1.3.1.8

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.3.1 Given a list of listening barriers and recommended corrective actions, MATCH each of ten barriers to effective listening with a recommended corrective action. 90% accuracy is required.

1.3.2 Given a list of faulty communication patterns and recommended corrective actions, MATCH the faulty communication pattern with a corrective action. 80% accuracy is required.

ENABLING OBJECTIVE (Cont'd)

1.3.3 Given a list of speaker and listener responsibilities, LABEL the speaker responsibilities with an "S" and the listener responsibilities with an "L". 100% accuracy is required.

CRITERION TEST: Progress Check A-012-0011-T1

HOMEWORK: Read Information Sheet 1.3.1I in the Student Guide.

1.3.2

MISSING MATERIAL

13

1.3.3

MISSING MATERIAL

1.3.4

OUTLINE OF INSTRUCTION	**INSTRUCTOR ACTIVITY**	**STUDENT ACTIVITY**
be lightly regarded.		
CORRECTIVE ACTION:	Discuss with class.	Participate in class discussion
(1) Find areas of interest		
(a) Listen for information which can be put to use.		
(b) Subject may be completing forms, but may be vital to future tasks.		
2. BARRIER: Criticizing the delivery		
a. Speech delivery and appearance		
CORRECTIVE ACTION:		
(1) Judge content - not delivery		

(a) Subject matter is much more important than who is speaking.

3. **BARRIER:** Getting overstimulated

   a. Snap judgements

   CORRECTIVE ACTION:

   (1) Withhold evaluation until comprehension is complete.

      (a) DO NOT make premature judgements.

      (b) Listen to the entire speech before offering rebuttals or readily accepting the speaker's premise.

4. **BARRIER:** Listening for facts

OUTLINE OF INSTRUCTION | **INSTRUCTOR ACTIVITY** | **STUDENT ACTIVITY**

a. Tendency to memorize factual information instead of listening for ideas and concepts.

CORRECTIVE ACTION

(1) Listen for ideas, concepts, principles

(a) DO NOT become a "cataloger" of facts

(b) Facts make sense only when they support an idea, a concept, principle or skill.

5. **BARRIER**: Outlining everything

a. Preoccupation with a plan of organization.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
CORRECTIVE ACTION:		
(1) Be flexible in note-taking.		
(a) Devise a systematic approach to note-taking and adjust to pattern of speaker.	Examples: Note "key words", or summarize ideas after they have been developed thoroughly by speaker	
6. BARRIER: Faking attention		
a. Daydreaming		
CORRECTIVE ACTION:		
(1) Work at listening		
(a) Concentrate on what is being said. Listening is not passive.		
(b) If drowsy, get up; stir around, get the blood circulating.		
7. BARRIER: Distractions		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

- a. Internal and external disturbances
- b. Eating in class, rumbling through papers, poor ventilation.

CORRECTIVE ACTION:

- (1) Resist distractions
  - (a) Make one's self as comfortable as possible
  - (b) Adjust to any kind of abnormal situations.

8. **BARRIER:** Evading the difficult

- a. Technical and theoretical materials.

CORRECTIVE ACTION:

- (1) Exercise the mind in listening to difficult materials.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(a) Develop an appetite for difficult material. (b) Avoid a defeatist attitude about difficult topics. 9. **BARRIER:** Submitting to emotional words. a. Losing meaning of words and phrases, abstracting material taken out of context. **CORRECTIVE ACTION:** (1) Maintain an open mind. (a) Identify and analyze words or phrases most upsetting emotionally. (b) Evaluate words in the context in which emotional words were		

originally presented.

10. BARRIER: Wasting thought power.
    - a. Taking mental liberties.
    - b. It is possible to listen three times as quickly as the speaker can talk.

    CORRECTIVE ACTION:

    (1) Anticipate the speaker's next move.
        - (a) Mentally sub-summarize what the speaker has said on a periodic basis.
        - (b) Use the advantage of being able to think faster than the speaker can talk.

OUTLINE OF INSTRUCTION

B. Language Patterns

1. BY-PASSING

a. Sender and receiver miss each other with meanings.

(1) Different meanings to different people; burn, chop, head, cool, gross, etc.

(2) Different words have the same meaning - overhead/ceiling, deck/floor.

(3) Slang expressions, "far out", "up-tight".

(4) Technical or trade jargon.

b. Corrective action:

INSTRUCTOR ACTIVITY

Example of "professional By-passing":

1. An American car and a Russian car was on display at an international car show. An independent evaluator rated the cars and declared the American car to be the best engineered car. TASS, the Soviet paper, reporting the following: "Russian car finished second in auto show, the American car came in next to last."

STUDENT ACTIVITY

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Attention to who is transmitting message.		
(2) Ask questions - paraphrase remarks.		
2. ALLNESS		
a. Inclination to believe that one is all-knowing about a subject and can make a definitive and final statement about it.	1. Stress the results of abstracting: usually done to enhance one's own beliefs, goals, values.	
(1) Results in closed-minded, narrow points of view.	2. Impossible to be all-knowing about any subject matter.	
(2) Allness results from two false assumptions:	Example: Third class petty officer in "A" school who has fleet experience proclaims to young student, he knows all the "ins" and "outs" of working in	
(a) It is possible to know and say		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
everything about something.	his area; he is a self-appointed expert.	
(b) What is said includes all that is important about the subject.		
b. Corrective Action Develop HUMILITY towards subject. Quantify remarks, "As far as I know"., etc.		
3. STEREOTYPE	Examples:	
a. Indiscriminate application of a fixed image of a group to an individual assigned to that group disregarding individual differences.	1. Brawny but brainless athlete. 2. A poet may be considered as "meek", "sensitive", "weird", "strange", "a loner", although individually he has none of these traits.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Tendency to classify or categorize everything.		
b. Corrective Actions		
(1) Accept premise of uniqueness.		
(2) "Which index", ask for clarification.		
4. FROZEN EVALUATION		
a. Failure to acknowledge changes which occur during the passage of time.	Examples: 1. Outstanding citizen once was known as teenage trouble-maker. Some members of the community still believe he is a trouble-maker based upon youth activities.	
(1) Once something is labeled, it does not change.		

TLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Corrective Action Evaluate things as they are now, not as they were at a period of time in the past.	2. Schools worked well when normative testing was used; criterion testing does not provide for competition - therefore it serves little purpose.	
5. POLARIZATION	Examples:	
a. Thinking and communicacating in "either-or" terms.	1. A college professor may be either a top-notch researcher or an excellent teacher. He certainly is not both.	
(1) Contradictories - One alternative must occur, but the other cannot.	2. Kids these days do not appreciate what they have. Either they sweat for what they have, or they take it for granted.	
(2) Situations involving middle ground are mistaken for contradictories. If there is an alternative which is neither		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

"Yes" or "No", but maybe or perhaps, that issue is a contrary. Often shades of gray exists.

- What is rich or poor? How cold is cold?

b. Corrective Action:

(1) Apply "How much index"; use numbers and concrete examples when possible.

(2) Substantiate middle terms, or quantifying remarks.

C. Speaker and Listener Responsibilities

1. Speaker Responsibilities

a. Determine the purpose

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Inform or teach		
(2) Persuade		
(3) Entertain		
b. Gather support material		
(1) Research the material.		
(2) Must have knowledge of material.		
c. State the purpose		
(1) Points should be clearly and concisely stated at beginning.		
(2) Audience should know what to expect from speaker.		
d. Develop and organize in a logical sequence.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

(1) Time or chronological order

(2) Spatial or geographical relationship

(3) Topical pattern

(4) Cause and effect

(5) Problem and solution

e. Amplify and support key points

Provide:

(1) examples

(2) analogies

f. End the speech appropriately.

(1) Conclusion should bring the speech together in a concise, short format.

2. Listener Responsibilities

a. Concentrate on what is being said.

(1) Many points of logic lost if mind wanders.

(2) Impossible to listen EFFECTIVELY and think about something else.

b. Listen ahead.

(1) Thinking ahead will reduce distractions.

(2) DO NOT jump so far ahead of speaker that the message is lost because of trying to determine what will or will not be said.

(3) Anticipate areas of speech so the subject matter is not foreign.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. Weigh points. (1) Is there enough evidence to support the speaker's premises? Are there outside forces which may make the speaker's rationale correct or incorrect? d. Review the speech (1) At natural breaks, mentally summarize to that point. Determine if what is being said makes sense. (2) Decide how key points were reached, and the direction the speech is taking.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
e. Listen to the whole person.		
(1) The speaker is not just speaking with words; observe facial expressions, gestures, and voice modulation which reflect the speaker's own experiences and perhaps biases.		
(2) If possible, explore the speaker's background, attitude or philosophy to provide insight.		
III. SUMMARY		
A. State the lesson objectives	Turn to cover page and read the lesson objectives.	
B. Major Teaching Points	Briefly summarize the major teaching points.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
1. Barriers to Effective Communication and Corrective Action to Improve Listening		
2. Faulty Communication Patterns and Recommended Corrective Actions.		
3. Speaker and Listener Responsibilities		
IV. APPLICATION - N/A		
V. EVALUATION		
A. Check for understanding	Ask thought-provoking questions to check student understanding of lesson topic.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
B. Progress Check A-012-0011-T1 will be given Period 17.	Administer progress check first period of day following lesson 1.5.	
VI. ASSIGNMENT		
A. Read Information Sheet 1.3.1I in the Student Guide.	Read Information Sheets 1.4.1I and 1.5.1I in the Student Guide.	

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054 DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.4 THE NAVY TRAINING PROGRAM

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 3.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVEDTRA 106A Interservice Procedures for Instructional Systems Development
2. CNTT A-67 Training Program Coordinator's Handbook
3. NAVEDTRA 110 Procedures for Instructional Systems Development
4. OPNAVINST 5450.194 Mission and Functions of the Chief of Naval Education and Training
5. CNETINST 1500.12 Glossary of Navy Education and Training Terminology
6. CNETINST 1550.5 Policy and Doctrine for Instructional Systems Development
7. CNETINST 3500.3 Personnel Qualification Standards (PQS) Program

Instructional Aids:

1. NAVEDTRA 106A
2. NAVEDTRA 110

Text:

1. Student Guide pp. 1.4.1.1 - 1.4.1.9

TERMINAL OBJECTIVE:

1.0 Utilizing subject matter and any appropriate reference materials, the student instructor will PLAN and WRITE lesson topic guides for practice teaching lesson requirements. The lesson topic guides must meet the requirements outlined in course instruction sheets 1.9.1I and 1.10.1I and lesson presentation guidelines provided by the Instructor Basic Course.

ENABLING OBJECTIVES:

1.4.1 Given a list of nine descriptive statements, IDENTIFY those which refer to self-paced instruction with an "S", those which refer to group-paced instruction with a "G", and those which refer to both with a "B". No more than two errors permitted.

ENABLING OBJECTIVES: (Cont'd)

1.4.2 MATCH a list of the major steps of the systems approach to training with a list of statements that describe the purposes/outcomes of those steps. The use of classroom notes is allowed. 80% accuracy is required.

CRITERION TEST: Progress Check A-012-0011-T1

HOMEWORK: Read Information Sheet 1.4.1I in the Student Guide.

1.4.2

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact		
1. If first meeting with the class then introduce yourself.		
2. Give any background on yourself that might be of interest.		
3. after the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives	Turn to cover page of LTG and read objectives	
1. State and display the TO and EO's for the lesson topic.		
2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.		
C. Establish Readiness		
1. Motivating statements		
a. Develop interest in lesson topic		
b. How will the student use the lesson material?		
c. Why does the student need to know the lesson material.		
d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson overview a. Lesson Topic; The Navy Training Program	State and Display on Chalkboard/VAP	
b. Major Teaching Points: (1) Instructional Modes (a) Group-paced (b) Self-paced (2) The Systems Approach to Training	Mention that CNET mission and organization chart is provided in Student Guide as enrichment material.	
II. Presentation		
A. Instructional Modes		
1. The two major instructional modes used in Navy training are self-paced and group-paced.	It is mandatory that students have read Infor sheet 1.4 prior to lesson.	
a. Self-paced instruction (also called individualized instruction) recognizes that learning is		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
always an individual matter, and the program is designed for each student to progress at his/her own rate of meeting objectives, not at the rate the instructor can present the material. Self-pacing applies many recent discoveries about how students learn. (1) Characteristics of self-paced instruction (a) one-on-one instruction		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(b) multi-media approach to meet individual learning needs	Explain "multi-media"	
(c) immediate feedback to student about his learning through written questions, self checks and frequent progress tests and summaries.		
(d) All tests are oriented to objectives and are diagnostic and prescriptive.	Discuss terms diagnostic" and "prescriptive"	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
Diagnostic - Identifies learner deficiencies. Telling student exactly which objectives were not achieved gives more information than "score was 80%." Prescriptive - Once trainee deficiencies are known, a plan of action to overcome just-		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
those deficiencies can be developed called a "prescription"		
(2) Role of the Self-paced instructor In a self-paced system, the instructor deals with students one-on-one and in small groups. Instead of a lecturer, he is a consultant and a tutor. The instructor is dealing primarily with people rather than subject matter,		

and must develop his skills in helping students overcome problems in learning.

(3) Limitations

Because self-pacing is expensive to implement, it is used where student load is fairly heavy (250 per year) and subject matter is reasonably stable, so that start-up costs can be recovered by time saving.

NOTE: Frequently, the computer is used as an administrative aid in

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
self-paced courses to track students through the curriculum. b. Group-paced instruction (also called - traditional or lockstep instruction) assumes that all students learn and progress at the same rate. (1) Characteristics of group-paced instruction. (a) Instruction developed in a sequence and paced to suit the progress of the majority of the class (group of students)		

1.4.10

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(b) Most courses are taught by the traditional classroom/lab delivery system. (c) Requires special provisions for remedial/repeat instruction for slower students and acceleration for faster students. NOTE: This happens automatically with self-pacing. (d) Uses lectures and guided discussions		

1,4.11 4.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(supplemented by training aids) to present subject matter. (e) Requires on instructor with public speaking stills who can motivate students to learn and sustain interest in the lessons (f) Uses frequent oral questions and summaries to let student check his/her understanding and to		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
identify problem areas.		
(h) Tests are orientated to objectives		
(g) Uses T/A's to develop the Lesson		
(2) Role of the group-paced instructor		
(a) To present instruction to groups of students.		
(b) To maintain an atmosphere where all the students can learn and progress together.		
(c) Must develop his/her skills in		

1.4.13

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
helping students overcome problems in learning.		
B. The Systems Approach to Training - Instructional Systems Development (ISD)	Stress that good group-paced instructors will incorporate many features of self-paced.	
1. Definition: A systematic process of curriculum development which will privide an effective, costefficient pipeline to train personnel to perform those job requirements that accomplish the Navy's mission and which utilizes constant evaluation and feedback to ensure that training continues to meet fleet needs.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. ISD Procedures - Described in detail in NAVEDTRA 106, NAVEDTRA 110, NAVSEA OD 45519 and is divided into 5 phases.	Refer students to pages 1.4.1.4 through 1.4.1.9 of Student Guide.	Have copies of 106A/110 available for student examination.
a. Phase I - Analysis	Use a job field familiar to the students, such as auto mechanic, to illustrate the ISD process	
(1) Develop a list of all tasks performed (broken down by field or rating) called a Job Task Inventory (JTI)		
(2) Select tasks for which training will be provided.		
(3) Determine performance standards for tasks selected for training.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(4) Analyze existing courses to determine if usable in whole or in part.		
(a) Need to develop/ analyze course mission for this. The following elements must be included in the course mission.	Show example of a Course Mission to bring out elements.	
1. Entry level of students		
2. What the graduate will be able to do		
3. How well the graduate can perform		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. Where the training is designed to be used		
5. General conditions under which graduate will be able to perform		
(5) Select instructional setting for each task (Resident School, Fleet School, OJT)		
b. Phase II - Design		
(1) Develop learning objectives for each task selected for training.		
(2) Develop tests which measure each learning objective.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(3) Describe entry level skills for students.		
(4) Sequence learning objectives.		
c. Phase III - Develop		
(1) Plan effective learning activities to achieve the learning objectives.		
(2) Select instructional delivery system (self-paced or group-paced), the supporting media and write course control documents (curriculum outline/ system master plan)		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(3) Review/Select existing materials for possible adaptation (4) Develop instruction - develop all materials, procedures, plans and media necessary to conduct instruction where existing materials were not available. (a) Lesson guides (b) Instruction sheets (c) Audio-visual materials (d) performance projects (e) programmed texts		

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

(5) Validate instruction - a course "try out"

(a) New course must be taught at least twice

(b) Revised course must be taught at least once

(c) Course is revised as necessary.

d. Phase IV - IMPLEMENT

(1) Obtain all materials, equipment and other resources necessary to operate the course; train the staff.

(2) Conduct instruction

(a) Instructor will make presentation's provide for student access to learning resources, give demonstrations, administer tests keep whatever records are necessary and make recommendations for the improvement of instruction.

e. Phase V - CONTROL

(1) Conduct internal evaluation

(a) Identify training problems.

(b) Internal evaluation are conducted to correct problems within the course

(Bad test questions, unqualified instructors, inadequate time allocations, etc.)

(2) Conduct external evaluation

(a) To determine whether students who successfully complete training can do the job for which they were trained.

(b) To ensure the job is still the same as when it was job analyzed.

(c) To ensure the needs of the fleet are met.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(3) Revise system (a) Take corrective action to revise course as needed, as indicated by internal and external evaluations.		
III SUMMARY		
A. State the Lesson Objectives	Turn to cover page and read the T.O's and E.O's.	
B. Major Teaching Points 1. Instructional Modes 2. The Systems Approach to Training.	Briefly summarize each teaching point.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
IV APPLICATION		
Student will apply concepts presented in developing and presenting practice teaching lessons and in class discussions through the course.		
V EVALUATION		
A. Check for Understanding	Ask thought-provoking questions to check understanding of lesson topic.	Answer questions and discuss issues.
B. Progress Check A-012-0011-T1 will be given Period 17.	Administer Progress Check first period of day following lesson 1.5.	
VI. ASSIGNMENT		
A. Read Information Sheet 1.4.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING
COURSE A-012-0011

LESSON TOPIC: 1.5 LEARNING OBJECTIVES

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 3.0 Periods
Lab 3.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVEDTRA 106A, Interservice Procedures of Instructional Systems Development.

2. NAVEDTRA 110, Procedures for Instructional Systems Development.

3. NAVPERS 93913, Preparation of Learning Objectives.

Instructional Aids:

Training Equipment:

1. Flipchart

Posters:

1. 1.5.1P Learning Objective Analysis Worksheet (4 parts)

Films:

1. MB11055 "Programmed Learning".

Texts:

1. Mager, R. F., Preparing Instructional Objectives.

2. Student Guide, pp. 1.5.1.1 - 1.5.1.44.

Instruction Sheets:

1. Learning Objective Analysis Worksheet CNET-GEN 154014 (11-76)

TERMINAL OBJECTIVE:

1.0 Utilizing subject matter and any appropriate reference materials, the student instructor will PLAN and WRITE lesson topic guides for practice teaching lesson requirements. The lesson topic guides must meet the requirements outlined in course instruction sheets 1.9.1I and

TERMINAL OBJECTIVE: (cont'd)

1.10.1I and lesson presentation guidelines provided by the Instructor Basic Course.

ENABLING OBJECTIVES:

1.5.1 Given a list of definitions, SELECT the definition of a learning objective. 100% accuracy is required.

1.5.2 Without the aid of reference material, LIST three purposes of learning objectives. 100% accuracy is required.

1.5.3 Without the aid of reference material, LIST in descending order the two levels of learning objectives. Levels must match the criteria in NAVEDTRA 106A.

1.5.4 Without the aid of reference material, MATCH the three characteristics of a learning objective with a correct definition/example. 100% accuracy is required.

1.5.5 Given a list of five learning objectives, IDENTIFY the three characteristics by underlining the Behavior, Condition and Standard. 100% accuracy is required.

1.5.6 Without the aid of reference material, MATCH each of the four categories of learning objectives with a correct definition/example. 100% accuracy is required.

1.5.7 Given a list of learning objectives, CLASSIFY each learning objective by category. Classification will be performed by labeling the objective with an appropriate symbol. All objectives will be correctly classified.

1.5.8 WRITE learning objectives to support practice teaching assignments on a topic of your choice. The learning objectives will be evaluated by a staff instructor and judged SAT/UNSAT in accordance with criteria outlined in course instruction sheet 1.5.1I and the NAVEDTRA 106A.

CRITERION TEST:

Progress Check

HOMEWORK:

1. Read: Preparing Instructional Objectives by R. F. Mager.
1.5.2

HOMEWORK: (cont'd)

2. Read: Information Sheet 1.5.1I in Student Guide.

3. Write a minimum of one Terminal Objecitve and one or more Enabling Objectives to support each practice teaching lesson.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/ VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives.	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.	Optional: as an introduction. Show Film MB11055 Stop film at intermission.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson overview a. Lesson Topic: Learning Objectives b. Major Teaching Points: (1) Definition (2) Purposes (3) Levels (4) Characteristic (5) Categories (6) Checklist for Evaluating (7) LOAW	State and display of Chalkboard/VAP	
II PRESENTATION A. Definition - a clear, concise statement that specifies what the student will do (BEHAVIOR), under what CONDITIONS, and to what degree of proficiency (STANDARD) as a result of having received training. 1. Learning objectives describe an intended RESULT of instruction rather than the PROCESS of instruction itself.		

2. Must be written in behavioral terms of what the student will be able to do.

B. Purposes

1. Serve as a basis for selecting and designing course materials in order to attain the instructional intent of the course.
2. Define the behaviors students must exhibit at the end of instruction.
3. Provide guidance to ensure accurate and effective testing for assessing the effectiveness of the instruction.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVIT
4. Provide course managers a basic understanding of course content.		
5. Provide a basis for improving instruction.		
6. Cause the developers to think deeply and seriously about what is worth teaching.		
C. Levels		
1. Terminal Objective: a three-part learning objective expressed in terms keyed to a task (job related event) as listed in the Job Task Inventory to help the student achieve the course mission (course objective).	Refer students to the student guide for enrichment material on p 1.5.1.4.	
a. Describes behavioral actions, performance		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
conditions, and the attainment standards expected of the student upon completion of instruction.		
b. The first step in writing objectives is to prepare a terminal objective for each task statement from the Job Task Inventory selected for training.		
c. Must be criterion testable.		
2. Enabling Objective: a three-part learning objective which helps the student achieve a terminal objective.	Refer students to the Student Guide for sample illustration of how Terminal and Enabling Objectives combine.	Follow in Student Guide.

a. It describes the behaviorioral actions, performance conditions, and attainment standards of an intermediate step the student must learn in order to perform a task (terminal objective).

b. Enabling objectives are written with conditions and standards appropriate to the training environment.

c. They support one or more terminal objectives.

d. Cannot have a standard less than that required by the Terminal Objective it supports. 1.5.9

e. Must be criterion testable.

D. Characteristics

All learning objectives can be broken down into three characteristics or major elements. These characteristics help make an objective communicate in INTENT. They also answer three question: (1) What should the student be able to do?; (2) Under what conditions do you want the student to be able to do it?; and (3) How well must it be done? These characteristics will be discussed in detail below. A simple but direct, example of the three characteristics is:

Behavior--add a column of numbers

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
Condition--without mechanical assistance Standard--in 2 minutes without error. 1. Behavior (performance) - identifies what the student will do to demonstrate what he/she has learned.		
a. Most important and indispensable element of an objective. Describes the kind of behavior that will be accepted as evidence that the student has mastered the objective. If a statement doesn't state a behavior then it isn't an objective.	Give example: List five parts of the .45 cal pistol; solve quadratic equations.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Consists of three parts		
(1) Subject - Always the student. (Can be implied).		
(2) Verb - must reflect behaviors that are Observable Measurable Verifiable Reliable (Not prone to varying interpretation).	While in I.B.C., the following single verbs may be used: list, match, label, decode, solve select, compute, calculate, discriminate, convert and any verbs that are categorized as physical still verbs.	
(a) The behavior may contain two words 1. The first	The following verbs require a second verb: Identify, classify, categorize, state, name, describe, relate, express, analyze and any mental skill verbs not listed above.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
indicates the category of the objective being written. 2. The second indicates how the learner will perform the behavior 3. If there is NO doubt about what the student is goint to do, only one verb is required.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. If there is any doubt, add a second verb to indicate how the student is to perform the behavior.		
5. Examples		
a. Two verbs. DESCRIBE in WRITING the relationship between force, mass and acceleration.		
b. One verb: ADJUST a carburetor		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(3) Object - indicates what is acted upon.		
2. Conditions - Define the circumstances under which the behavior will be performed.		
a. Limiting - sets limits or restrictions	Give example: In a darkened room; without a service manual.	
b. Aiding - provides help or assitance.	Give example: With the use of a service manual; or using the schematic provided.	
c. A combination of aiding and limiting conditions may be used.	Give example: Without reference material and given the use of a calculator.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
d. Examples: Job aids, equipment, technical references, special tools environmental conditions, special instructions, signals, symbols, problems, situations and/or contingencies.		
3. Standards - specify the criterion which the demonstrated behavior must meet.		
a. Completeness		
(1) The precise nature of the output format must be correct as outlined in NAVEDTRA 110.		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

Ex: The definition must include the relationship of a force to acceleration and mass.

(2) Number of features that the output must contain. Ex: The critique must contain three advantages and three disadvantages. The carburetor must idle at its smoothest point.

(3) Number of steps, points, pieces, etc., that must be covered or produced. Ex: All 10 steps must be performed.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

(4) Any quantitative statement that indicates acceptable portion of total. Ex: Given a rough draft type pages without error at a minimum rate of 20 pages per day.

b. Accuracy

(1) How close to correct the performance must be. Ex: 100%, 80%, 4 of 5 correct without error.

(2) Exact number reflecting tolerances. Ex: with ± 001 units, to be nearest tenth.

(3) Values or dimensions that acceptable answers/performance can assume. Ex: must withstand shear test of 15.6 pounds.

c. Time

(1) How many days, hours, minutes, seconds can be used to demonstrate the behavior. Ex: Within 3 minutes.

E. Categories - learning objective action statements are placed in one of four learning categories: information/knowledge, mental skills, physical/manual skills, and attitudes. Each category

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
is analyzed differently to expand the action statement into complete learning objectives and to identify lower level prerequisite objectives. The learning categories also facilitate sequencing the instruction.		
1. Information/knowledge		
a. The specific information or facts supporting successful skill performance.		
b. Identify the knowledge a student must be able to recall or state in order to achieve the learning objective.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. Example: "In writing, without the aid of classroom notes, DEFINE ohms law. 100% accuracy is required.	Have students identify the behavior, condition and standard. Provide additional examples as necessary for student understanding.	Identify the Behavior, condition and standard.
2. Mental Skills		
a. The active mental processes that call for rapid, accurate and expert performance of a task such as identifying, classifying, applying rules and problem solving.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Example: "Given draft readings and required plans and tables, COMPUTE displacement for any class ship. Displacement must be computed within ± 5% of actual answer.	Have students identify the behavior, condition and standard. Provide additional examples as necessary for student understanding.	Identify the behavior, condition and standard.
3. Physical/Manual Skills		
a. Physical or manipulative activity that requires movement of the muscles of the body which are directly observable.		
b. Example: Field - strip and assemble a 45 cal. pistol under conditions of total darkness IAW FM-4-1.	Have students identify the behavior, condition and standard.	Identify the behavior, condition and standard.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
	Provide additional examples as necessary for students understanding.	
4. Attitudes		
a. Reflected in the choices a person makes or the behavior exhibited by the person.		
b. Emotions, feelings.		
c. Not always directly observable.		
d. Example: Given a job task the student will demonstrate a safe approach toward the task without error.	Have students identify the behavior, condition and standard. Provide additional examples as necessary for student understanding.	Identify the behavior condition and standard.

MISSING MATERIAL

1.5.24

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
of conditions and/or standards in order to secure the desired behavior?		
9. Is the assignment of each terminal or enabling objective to a learning category documented in the LOAW?		
10. Do the enabling objectives convey the level of detail needed to design instructions?		
G. Learning Objective Analysis Worksheet - provides a convenient means of keeping track of all objectives, both terminal and enabling. All objectives developed for a course will be entered on a LOAW.	Use poster set 1.5.1P LOAW (4-parts)	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
1. COURSE a. Title of the course and CANTRAC number. b. For PT's use INSTRUCTOR TRAINING COURSE A-012-0011.	Tell students they will write their Learning Objectives on these forms.	Follow outlined procedures in developing Lo's.
2. UNIT/MODULE a. Number is assigned by the task analysis team, (one, two, three, etc) depending on how course is segmented. b. For PT's use unit one.		
3. Lesson Topic a. Number assigned after the learning objectives have been sorted into a teaching sequence.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Identifies the unit and lesson within the unit.		
c. Example: 1.1 Lesson topic one Unit one		
d. For PT's use Lesson Topic 1.1 for first PT, Lesson Topic 1.2 for second PT, etc.		
4. Task I.D. Number		
a. Task identification number from the Job Task Analysis.		
b. Provides for audit trail so that the L.O. may be traced back to a specific job task.		
c. For PT's leave blank.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
5. Page No. a. Learning Objective page number; the sequence number of the page itself. b. For PT's number as appropriate. 6. Terminal a. Check this box if a Terminal Objective is identified. 7. Terminal Objective No. a. Enter the terminal objective number (i.e., 1.0, 2.0, 3.0) b. For PT's use TO 1.0.		

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

8. JPM No.
    a. Tests used to evaluate proficiency of a job holder on each task he/she performs.
    b. Leave blank while in I.B.C.
9. Enabling Objective No.'s that support the Terminal Objective.
    a. Enter the EO's numbers that support the TO identified.
    b. For PT's use the EO numbers assigned/required to teach lesson.
10. Enabling
    a. Check this box if an Enabling Objective.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

11. Enabling Objective Number

    a. A three-digit number that identifies the lesson topic and the objective number within the lesson topic.

    b. Example: 1.1.1

       First EO in Lesson Topic 1.1

       Lesson Topic 1.1

    c. For PT's number EO's in accordance with the lesson topic that teaches the EO

12. Terminal Objective Number Supported

    a. Enter the TO numbers supported by this EO.

    b. For PT's use TO 1.0

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

13. Learning Objective Action Statement
    a. Write the behavior or performance statement here in behavioral terms.
14. Condition
    a. List the conditions that apply to the behavior.
15. Standard
    a. Specify the level of proficiency required when demonstrating the behavior.
16. Learning Category
    a. Assign one of the four learning categories
        (1) Informational

1.5.31

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(2) Mental Skill (3) Physical Skill (4) Attitude		
17. Media Selection a. List media requirement	NOTE: Test item construction will be covered in Lesson 1.19. Leave test item further direction.	
18. Equipment required a. List the equipment required for demonstrating the behavior	Use poster of completed samples 1.5.1P LOAW. Have students refer to Student Guide for completed samples.	
III SUMMARY		
A. State the Learning Objectives B. Major Teaching Points 1. Definition 2. Purposes 3. Types	Turn to cover page and read the objectives. Summarize each major teaching point.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. Characteristics		
5. Categories		
6. Checklist for Evaluating		
7. LOAW		
IV APPLICATION None	Remind students they will be required to write Terminal and Enabling Objective to support the practice teaching assignments.	
V EVALUATION		
A. Check for understanding	Ask thought provoking questions to check student understanding of lesson topic.	
B. Progress Check A-012-0011-T1 will be given Period 17.	Administer first period of following day. Remind students to study material in Lesson Topic 1.3, 1.4, and 1.5.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
V ASSIGNMENT		
A. Read: Preparing Instructional Objectives by R. F. Mager.		
B. Read: Information Sheets 1.5.1I, 1.6.1I, 1.7.1I and 1.8.1I in the Student Guide.		
C. Write a minimum of one terminal objective and one or more enabling objectives to support the first practice teaching assignment. The assignment to be submitted for instructor comments and approval during the first period of following day.	Check objectives prepared by student. Return and review with students during Instructional Period 24.	

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

Date: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0111

LESSON TOPIC: 1.6 THEORIES/LAWS OF LEARNING

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 3.0 Periods
Lab 3.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVEDTRA 10058-B, Human Behavior and Leadership, Chaps. 3, 7 and 11.
2. AF Manual 50-62, Principles and Techniques of Instruction.
3. Beihler, Robert F., Psychology Applied to Teaching, Chaps. 7 and 8.
4. Klausmeier and Goodwin, Learning and Human Abilities, 4th Edition, Chaps. 3, 6, 12, 13, and 14.
5. Pitner, Ryan, West, Aleck, Crow, Smith, Educational Psychology, 6th Edition, Chaps. 5 and 6.

Instructional Aids:

Training Equipment:

1. Overhead Projector
2. Movie Screen

Transparencies:

1.6.1XP	Imitation
1.6.2XP	Conditioning
1.6.3XP	Trial and Error
1.6.4XP	Association
1.6.5XP	Insight
1.6.6XP	Transfer
1.6.7XP	Law of Readiness
1.6.8XP	Law of Effect
1.6.9XP	Law of Primacy
1.6.10XP	Law of Intensity
1.6.11XP	Law of Exercise
1.6.12XP	Law of Recency
1.6.13XP	Hypothetical Learning Curve
1.6.14XP	Forgetting Curve
1.6.15XP	Value of Recitation

Text:

Student Guide pp. 1.6.1.1 - 1.6.1.9

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVES:

1.6.1 With 100% accuracy, WRITE the definition of learning.

1.6.2 With 100% accuracy, MATCH two groups of theories of learning with a correct definition.

1.6.3 MATCH the ways that students learn with a correct definition/application. No more than one error is permitted.

1.6.4 With 100% accuracy, MATCH the Laws of Learning with a correct definition/application.

1.6.5 With 100% accuracy, MATCH three theories of forgetting to a correct definition/application.

CRITERION TEST: PROGRESS CHECK
A-012-0011-T1

HOMEWORK:

Read Information Sheet 1.6.1I in Student Guide.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.	Collect Homework Assignment from Lesson Topic 1.5.	
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.	Stress that lesson will present practical applications of learning theories.	
2. Lesson overview a. Lesson Topic: THEORIES/LAWS OF LEARNING	State and display on Chalkboard/VAP	

OUTLINE OF INSTRUCTION — INSTRUCTOR ACTIVITY — STUDENT ACTIVITY

b. Major Teaching Points:
  (1) Definition of Learning
  (2) Theories of Learning
  (3) The Ways That a Student Learns
  (4) The Laws of Learning
  (5) Theories of Forgetting

II. PRESENTATION

A. Definition of Learning

1. A change in an individual's behavior as a result of acquiring a new knowledge, skill or attitude. Learning is divided into four learning categories.

B. Theories of Learning

1. Association Theory Group--the connection of a specific response to a given stimulus.

a. Stimulus--a situation, circumstance, sensation or action that causes a behavior to occur.

b. Response--an action or behavior elicited by a specific stimulus.

c. Learning is the process of building new S-R bonds and organizing them into a system; or results in the forming of habits by the connection of stimuli and responses that previously did not exist.

d. EXAMPLES:

STIMULUS	RESPONSE
(1) See a RED light while driving a vehicle	(1) Stop the vehicle

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

STIMULUS	**RESPONSE**
(2) Who was the first United States President?	(2) George Washington

e. Additional names associated with this group

(1) Classical conditioning

(2) Instrumental conditioning

(3) Connectionism

(4) Stimulus-Response

2. Cognition Theory Group--the act of knowing, with emphasis placed on insight and development of perception.

a. Simple S-R bonds are too limited to explain such complex learning as understanding concepts and ideas.

b. Insight--the solving of a problem through understanding the relationship of he various parts of the whole problem.

c. Perception--becoming aware through sensory experiences.

d. Closely approaches the process of trial and error or trial and success.

e. Example:

Chimpanzee, in a cage with stacking boxes and bananas hanging from overhead, saw a relationship and stacked the boxes to reach bananas. "Ah-ha" learning.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
C. The ways that a student learns 1. Imitation a. Duplicating the observed actions of others b. Most basic way of learning c. The instructor's obligation is to set the desired example.	Use transparency set 1.6.1XP Ways that Students Learn	
2. Conditioning a. The process by which an automatic response is established for a given stimulus. b. Instructor must provide drill and practice. (1) Conditioning depends on exercise	Display transparency	

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

3. Trial and Error
    a. Selecting, after repeated efforts, the method that has proved to be most successful.
    b. The instructor must provide supervision
        (1) May be harmful to student or the equipment.
    c. The instructor must provide encouragement
        (1) Repeated efforts may be discouraging
    d. The student requires background of the job that he is doing

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. Association - A Mental Process	Display transparency	
a. The comparison of past learning to a new learning situation		
b. The instructor must make as many analogies, associations or examples as possible to aid student understanding.		
5. Insight	Display transparency	
a. The recognition of a relationship between the various factors in a problem situation		
b. Instructor must recognize and compensate for individual differences in the student's ability to gain insight		
c. Student background affects insight		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
d. Subject matter sequence affects insight		
e. Avoid being impatient with your students.		
(1) Insight may be a sudden or a lengthy process		
f. Make associations for the student		
g. Provide assistance for the students		
6. Transfer - Performance	Display transparency	
a. Applying past learning to a new learning process		
b. For the student to achieve transfer you must teach it		
c. Transfer is dependent upon retention, recall, and student ability		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
d. To teach for transfer, the instructor must:		
(1) Make the student desire to learn and remember		
(2) Make initial learning meaningful		
(3) Avoid faulty organization		
(4) Provide for sequential and cumulative learning		
(5) Emphasize related concepts and principles		
D. The laws of learning		
1. The Law of Readiness - The individual learns best when he is ready to learn	Use transparency set 1.6.2XP Laws of Learning	
a. Physically, mentally and emotionally ready to learn	Display transparency	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Prepare the lesson		
(2) Prepare the classroom		
(3) Prepare the students		
(a) The students must have the necessary background to be able to understand the materials.		
(b) The students must have the active desire to reach a learning goal, i.e., motivation		
2. The Law of Effect - The individual will learn those things which seem profitable to him or which are attended with pleasure	Display transparency	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Bring out the need and value of the material being presented		
b. Make the learning process satisfying to the student		
c. The best path of learning is from success to success. Teach so the students can achieve success.		
3. The Law of Primacy - Other things being equal, the individual tends to learn better and retain longer, his first learning in a new field	Display transparency	
a. Teach the correct way first		
(1) Correct all errors immediately		
b. Teach in logical sequence.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. The Law of Intensity - A vivid experience is learned better	Display transparency	
a. Appeal to as many senses as possible		
(1) Use colored and various types of training aids to emphasize important points.		
(2) Practice effective oral delivery		
(3) Initiate and maintain class participation		
(4) Use instruction sheets		
(5) Use actual rather than simulated experiences when feasible		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
5. The Law of Exercise - The individual learns by practice and repetition a. Learning must be meaningful and correct b.* Students learn best by doing, not by listening. c. Repeat important points d. Review at appropriate intervals e. Provide for student application using a variety of methods	Display transparency	
6. The Law of Recency - Stimulus and response being equal, those things learned most recently will be remembered better than those learned in the past (timewise).	Display transparency	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. The further a student is removed timewise, from a new fact or procedure th more difficulty he/she has in remembering it.		
NOTE: Learning Curve	Display transparency	
1. Graph of the learning of a subject or skill, at a given point in time.	1.6.3XP Learning Curve This info not in Student Guide. Advise class to take notes as appropriate.	
1) 1-2: slow start the first week or so. Just how slow depends on how much previous experience a student has with the subject or skill.		
2) 2-3: after the student gets "the hang of it", he/she goes through a period of rapid improvement. The		

first taste of success usually makes a new activity enjoyable to the beginner and motivates him/her to keep trying.

3) 3-4: student has reached a leveling off stage. Continued mastery of the activity will depend on whether the experience had a special appeal for the student or whether the student was required to use the knowledge or skill.

b. To maximize learning in the classroom

(1) When presenting a new knowledge or skill, give extra assistance and encouragement to the slow learner.

(2) Make the most of initial interest and enthusiasm.

(3) When a leveling off improvement occurs, either encourage continued practice to maintain the skill or help students master advanced techniques.

E. Theories of Forgetting

1. Disuse--persons forget what they do not use; this knowledge is locked in the recess of the mind and is difficult to summon up.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

a. To combat disuse

(1) An instructor should make his/her students learn things well in the beginning. Brain patterns fade more slowly if they are well established in the beginning.

(2) Make use of recitation, examples and test questions that provide repeated exposure to the subject. Thus, giving the student the opportunity to apply the ideas or methods they have learned.

(3) Have frequent review sessions, before exams,

between the introductory and advanced course and during each lesson topic.

2. Interference--forgetting because another experience overshadows. New events displace old, closely related or material not well learned.
   a. To combat interference
      (1) Help student to master the material thoroughly at the start. Material learned well is less likely to be displaced by new material.
      (2) Provide distributed study periods, dividing long subjects into smaller parts.

OUTLINE OF INSTRUCTION | **INSTRUCTOR ACTIVITY** | **STUDENT ACTIVITY**

(3) Alternate between extremely difficult and easier lesson topics.

(a) Studies of forgetting reveal that the greatest amount of interference occurs when one extremely difficult activity is followed by another difficult activity.

3. Repression--forgetting due to submersion caused by unpleasant material but not intentionally done.

a. To combat repression

(1) Make the classroom and the instruction as

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
pleasant and enjoyable as possible.		
NOTE: Forgetting Curve a. Graph of forgetting 1) 1-2: the greatest amount of forgetting occurs immediately after the learning session. 2) 2-3: rate of forgetting has slowed down. 3) 3-4: rate of forgetting has leveled off. Most of the material that a student will forget has been forgotten by this time. b. In order to minimize forgetting	Display transparency 1.6.4XP Forgetting Curve Not in Student Guide. Advise students to take notes as appropriate.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
1) Make frequent use of repetition, recitation, application, tests and review.	Display transparency 1.6.5XP Value of Recitation	
2) Students will always forget part of what they learn. Utilizing the previous techniques will not eliminate forgetting but it will decrease the rate at which students forget the learning that has occurred.		
III. SUMMARY		
A. State the Learning Objectives	Turn to cover page and read learning objectives.	
B. Major Teaching Points		
1. Definition of Learning	Summarize each Teaching Point	
2. Definition of Learning Process		
3. Theories of Learning		
4. The Ways that a Student Learns		
5. Laws of Learning		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
6. Theories of Forgetting		
IV. APPLICATION		
A. Students will employ Laws and Theories of Learning and Theories of Forgetting during each practice teaching lesson.	Place emphasis on implications of Theories and Laws in Teaching a Lesson Topic.	
V. EVALUATION		
A. Check for understanding	Ask thought-provoking questions to check student understanding of the lesson topic.	Answer the instructor's questions.
B. Progress check A-012-0011-T1 will be given Period 33.		
VI. ASSIGNMENT		
A. Read Information Sheet 1.6.1I in Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.7 LESSON #1 REQUIREMENTS 20-MINUTE (KNOWLEDGE)

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 1.0 Periods
Lab 13.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. Instructor Training Course A-012-0011 Staff

Instructional Aids:

Training Equipment

1. Video Player
2. Video Monitor

Video Tape

1. 1.17.VT "Sample Lesson"

Text:

1. Student Guide pp. 1.7.1.1-1.7.1.4

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.7.1 In a classroom exercise, INSTRUCT a Twenty-Minute practice teaching (knowledge) lesson using the following:

a. Indoctrination in the specific requirements for a Twenty-Minute knowledge lesson.
b. Illustrated lecture method.
c. Chalkboard/Visual Aid Panel.
d. Self-developed learning objective(s).
e. Self-developed and annotated lesson topic guide.
f. Appropriate reference materials.
g. Appropriate instructional techniques.

The lesson presentation will be judged SAT/UNSAT by a staff instructor in accordance with the guidelines established in course Instruction Sheet 1.7.1I and will be videotaped so the student instructor can perform a self-critique of his/her own presentation with a staff instructor.

CRITERION TEST: Execute Enabling Objective 1.7.1

HOMEWORK: Prepare the necessary materials to instruct a practice teaching lesson as outlined in Information Sheet 1.7.1I.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material. d. Class must be motivated before meaningful learning can take place.		
2. Lesson overview a. Lesson Topic: Lesson #1 Requirements 20-Minute (knowledge)	State and Display on Chalkboard/VAP	

OUTLINE OF INSTRUCTION | **INSTRUCTOR ACTIVITY** | **STUDENT ACTIVITY**

b. Major Teaching Points:

(1) Specific Requirements
(2) Guidelines
(3) Instructional Material Development Checklist

II. PRESENTATION

A. Specific Requirements

1. Select a topic

a. DO NOT select topic on sex, religion, politics, or anything that could be dangerous to the human element. When in doubt obtain staff instructor approval first.

b. Knowledge only

2. Write a terminal objective

a. There is no requirement for the terminal objective to be met.

b. Use Information Sheet 1.5.1I.

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

3. Write a minimum of one enabling objective that supports the terminal objective.
    a. Sufficient number to provide between 10-13 minutes of teaching material.
    b. Enabling objective(s) must be satisfied by the lesson topic.
    c. Use Information Sheet 1.5.1I.
4. Perform an objective analysis for the enabling objective(s).
    a. Determine the major and minor teaching points.
    b. Use Information Sheet 1.8.1I.
5. Develop a lesson topic guide (two copies), in accordance with Information Sheet 1.9.1I.

UTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Cover page. (1) Provide all entries except for the criterion test and homework. These should be labeled none. b. Lesson topic elements (1) Introduction (2) Presentation (3) Summary (4) Application (5) Evaluation (6) Assignment 6. Annotate the lesson topic guide. a. Use Information Sheet 1.10.1I. 7. Method of instruction will be the Illustrated Lecture Method. 8. Instruct a 20-minute practice lesson using the chalkboard/VAP. Knowledge only. B. Guidelines 1. Introduction must include the following areas and be presented in the prescribed order.		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

- a. Establish Contact
- b. State the lesson objectives
  - (1) State and display the TO and EO's for the lesson topic
  - (2) May be placed on chalkboard/VAP, student handouts or contained in the Student Guide.
- c. Establish Readiness
  - (1) Motivating statements
  - (2) Lesson Overview (stated and displayed)
    - (a) Lesson Topic
    - (b) Major teaching points
      - 1 List
- e. Recommended time for an effective introduction is 3-5 minutes.

2. Presentation
   - a. Present an organized lesson using good oral delivery techniques, examples, explanations, analogies and associations.

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

b. The chalkboard/VAP must be used effectively to develop the lesson topic as it progresses.

(1) The only training aid that may be used during this lesson.

c. Use effective oral questions and questioning techniques to maintain good class participation. Oral questions must be asked throughout the lesson.

d. Recommended time for an effective presentation is 10-13 minutes.

3. Summary

a. State the lesson objective(s).

b. Briefly summarize each major teaching point.

c. Use the chalkboard/VAP as appropriate to summarize the lesson.

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

4. Application--None

5. Evaluation

   a. Check for understanding

      (1) Ask five thought-provoking questions of the class to check for understanding of the lesson topic. List questions and answers in Outline of Instruction Column.

      (2) If the students are unable to answer the questions, reteach as necessary.

   b. Complete progress check NONE.

6. Assignment--None

NOTE: Recommended time for the Summary, Application, Evaluation and Assignment is 3-6 minutes.

ENTIRE LESSON SHOULD BE COMPLETED WITHIN 16-24 MINUTES

Show videotape 1.7.1VT "Sample Lesson."

C. Instructional Materials Development Checklist

Refer to pg. 1.7.1.4 in the Student Guide.

Follow instructor in Student Guide and ask questions as appropriate.

1. Prior to your practice teaching lesson date you are required to have the following items checked and approved by a staff instructor.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Topic		
b. Terminal Objective		
c. Enabling Objective(s)		
d. Objective Analysis		
e. Lesson Topic Guide		
f. Annotated Lesson Topic Guide		
2. The following items must be provided to the staff instructor just prior to presenting your practice lesson.		
a. Instructional materials development checklist.		
b. Copy of the lesson topic guide.		
III. SUMMARY		
A. State the lesson objective(s)	Turn to the cover page and read the lesson objectives.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
B. Major Teaching Points	Summarize each teaching point.	
1. Specific Requirements 2. Guidelines 3. Instructional Materials Development Checklist	REMIND THE STUDENTS THAT PERFECTION IS ACHIEVED THROUGH PRACTICE. SPACES ARE AVAILABLE FOR THEM TO PRACTICE PRIOR TO THEIR PERFORMANCE FOR THIS LESSON.	
IV. APPLICATION N/A		
V. EVALUATION		
A. Check for Understanding	Ask thought provoking questions of the class to check for understanding.	Answer instructor's questions.
B. Execute Learning Objective 1.7.1 Practice teaching lessons begin __________.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
VI. ASSIGNMENT A. Comply with Information Sheet 1.7.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING
COURSE A-012-0011

LESSON TOPIC: 1.8 LEARNING OBJECTIVE ANALYSIS (KNOWLEDGE)

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 2.0 Periods
Lab 1.0 Periods

INSTRUCTIONAL MATERIALS:

1. Instructor Training Course A-012-0011 Staff

Instructional Aids:

Posters:

1. 1.8.1P Learning Objective Analysis (Knowledge)

Text:

Student Guide pp. 1.8.1.1 - 1.8.1.13

TERMINAL OBJECTIVES:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.8.1 Utilizing self-developed learning objectives and the objective analysis format for knowledge objective, WRITE an objective analysis to determine major and minor teaching points for lesson topic guides to support practice teaching knowledge lessons. The objective analysis will be judged SAT/UNSAT in accordance with the criteria outline in course instruction sheet 1.8.1I.

CRITERION TEST:

Execute Learning Objective 1.8.1 for practice teaching lessons #1 and #2.

HOMEWORK:

Read Information Sheet 1.8.1I in the Student Guide.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG an[illegible]ad objectives.	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		
2. Lesson Overview a. Lesson Topic: LEARNING OBJECTIVE ANALYSIS (KNOWLEDGE)	State and display on chalkboard/VAP	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Major Teaching Points: (1) Objective Analysis (Recommended Procedure)		
II PRESENTATION		
A. Objective Analysis (Recommended Procedures)		
1. An objective analysis is a process whereby the major and minor teaching points necessary to teach the behavior of an EO are determined. (Outline format to develop the main intent of an EO to generate an LTG).		
2. Transfer the lesson EO's from the LOAW's to the top of a piece of working paper.	Use 1.8.1P and page 1.8.12 in student guide and use to illustrate the analysis process as the lesson develops.	

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

3. Draw a line across the paper below the EO's.
4. Divide the remainder of the paper in half making two columns.
5. Label the left half as MAJOR TEACHING POINTS.
6. Label the right half as MINOR TEACHING POINTS.
7. Select the object of the verb in the behavior of the first EO. This along with any necessary modifiers, for clarification, becomes the key element of the first major teaching point.
    a. Place under major teaching point column.

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

8. Using the major teaching point as a reference develop the minor teaching points that directly support the major teaching points.

   a. Breakdown the major TP into small incremental blocks necessaty to explain and develop the main intent of the EO behavior.

   b. The number of minor teaching points will usually be dictated by the behavior of the EO.

   c. Primarily a sufficient number to allow the EO behavior to be performed to the standard specified.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
d. Develops the "need to know material".		
e. Sub-minor teaching points may also be necessary to give the lesson some body.		
9. Repeat steps 7 and 8 as necessary until all the EO's have been analyzed.		
10. The objective analysis becomes the PRESENTATION element of the LTG.		
a. Move the minor teaching points under the major teaching point they support.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
11. It is recommended that while here in the Instructor Training Course you have at least one major teaching point per EO.	Use the chalkboard/ VAP and develop an additional LO analysis on a selected objective. Allow for maximum student participation in the analysis development.	Assist the instructor in developing a LO analysis on a LO provided by the instructor.
12. In developing the objective analysis, utilize the following outline procedure:		

I Roman numerals consisting of one character are followed by three spaces; two-character numbers are followed by two spaces; three-character numbers are followed by one space. Used to indicate the six elements of a LTG.

A. Capital letters are followed by a period and two spaces. Used to indicate major teaching points.

1. Arabic numerals are followed by a period and two spaces.

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

a. Lower case letters are followed by a period and two spaces.

(1) Arabic numerals in parenthesis are followed by one space. Used to indicate minor teaching points.

(a) Lower case letters in parenthesis are followed by one space.

1. Arabic numerals underscored are followed by a period and two spaces.

a. Lower case letters underscored are followed by a period and two spaces.

1) Arabic numerals with right parenthesis are followed by one space.

a) Lower case letters with right parenthesis are followed by one space.

a. All subheads start under the first letter of the first word in the heading.

b. No period is used at the end of a heading or subheading in a topical

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
outline. Only the first word of the heading or subheading and proper names begin with a capital letter.		
III SUMMARY		
A. State the lesson objectives	Turn to the cover page and read the lesson objectives.	
B. Major Teaching Points	Briefly summarize the major teaching point.	
1. Objective Analysis (Recommended Procedure)		
IV APPLICATION - None		
V. EVALUATION		
A. Check for understanding	Ask thought-provoking questions to check student understanding of the lesson topic.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
B. Execute EO 1.8.1 for practice teaching exercise #1		
VI ASSIGNMENT		
A. Read Information Sheet 1.8.1I in the Student Guide.		
B. Write an objective analysis for the enabling objective(s) developed for the first practice teaching lesson. Submit for instructor comments and approval during next class session.	Check objective analysis prepared by student. Return and review with students during Instructional Period 32.	

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING
COURSE A-012-0011

LESSON TOPIC: 1.9 LESSON TOPIC GUIDE ELEMENTS/FORMAT

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 2.0 Periods
Lab 1.0 Periods

INSTRUCTIONAL MATERIALS

Instructional References:

1. NAVEDTRA 110, Procedures for Instructional Systems Development
2. MIL-STD-1379A, Military Standards Contract Training Programs
3. CNETINST 1500.12, Glossary of Navy Education and Training Terminology

Instructional Aids:

Flock Cards

1. 1.9.1FC Definitions
2. 1.9.2FC Purposes
3. 1.9.3FC Elements/Format

Text:

1. Student Guide pp. 1.9.1.1 - 1.9.1.7

TERMINAL OBJECTIVE:

1.0 Utilizing subject matter and any appropriate reference materials, the student instructor will PLAN and WRITE lesson topic guides for practice teaching lesson requirements. The lesson topic guides must meet the requirements outlined in course instruction sheets 1.9.1I and 1.10.1I and lesson presentation guidelines provided by the Instructor Basic Course.

ENABLING OBJECTIVES:

1.9.1 From a given list, SELECT the definition of a lesson topic as defined in CNETINST 1500.12. 100% accuracy is required.

1.9.2 From a given list, SELECT the definition of an instructor guide as defined in CNETINST 1500.12. 100% accuracy is required.

ENABLING OBJECTIVES: (Cont'd)

1.9.3 Without the use of reference materials, LIST two purposes for using a lesson topic guide. 100% accuracy is required.

1.9.4 Utilizing self-developed learning objectives, an objective analysis, subject matter reference material and a lesson topic guide format, DEVELOP and WRITE lesson topic guides to support four practice teaching assignments. The lesson topic guides must meet the criteria outlined in course instruction sheets 1.9.1I and 1.10.1I.

CRITERION TEST: Progress Check

HOMEWORK:

Read Information Sheet 1.9.1I in the Student Guide and comply with instructions in developing Lesson Topic Guide.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.	Collect Homework Assignment from Lesson Topic 1.8	
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish readiness 1. Motivating statements a. Develop interest in lesson topic b. How will the student use the lesson material? c. Why does the student need to know the lesson material. d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson overview a. Lesson Topic; LESSON TOPIC GUIDE ELEMENTS/FORMAT	State and Display on Chalkboard/VAP	
b. Major Teaching Points: (1) Definition of a LTG (2) Definition of an IG (3) Purposes (4) Elements/Format		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
II. PRESENTATION		
A. Definition of a Lesson Topic Guide	Discuss the definition of a Lesson Topic Guide Use 1.9.1FC Definition	
1. An organized outline of a single lesson topic taken from the curriculum outline and serving as a blueprint of what is to be accomplished in class. It is complete in detail and lists: a. the objectives b. main teaching points c. references d. training aids e. methods f. procedures g. the supplemental information as needed		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
B. Definition of an Instructor Guide	Discuss the definition of an Instructor Guide Use 1.9.1FC Definition Set.	
1. A series of Lesson Topic Guides grouped in units or by phases which collectively outline the teaching/learning activities to be accomplished during the course	Refer students to sample front matter is S.G.	
2. Also includes front matter: Cover page, foreword page, table of contents, safety notice and "How to Use the Instructor Guide."		
C. Purposes		
1. Provides administrative control	Use 1.9.2FC Set	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Standardizes subject matter presentation		
b. Aids in planning the sequence of subject matter		
c. Avoids duplication of subject matter		
2. Guide for the Instructor		
a. Ensures coverage of the subject matter		
b. Lists available instructional materials and instructional aids that the instructor can use		
c. Provides information on the complete identification of		

1.9.7

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
references for use within the lesson		
d. Acts as a timetable		
e. Lists criterion test, homework and assignments		
D. Elements/Format		
1. Lesson Topic Guide cover page format - a two column page containing information that will assist the instructor in preparing for the conduct of instruction	Use 1.9.3FC Set and develop format Direct students to page 1.9.1.1 in Student Guide (sample lesson guide on page 1.9.1.8)	Follow instructor in Student Guide
a. **Heading:** contains the document title of "LESSON TOPIC GUIDE" and the name of the training activity that developed the LTG.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
d. Classification: This designates the security classification of the material presented in the individual lesson, even though the instructor guide itself may not contain classified information. If not classified, insert "For Official Use Only."		
e. Allotted Lesson Time: The time allotted for completion of the individual lesson will be entered here in instructional periods for classroom and practical application (the same as		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Course title: the complete official course title as given in the curriculum outline. Include the CANTRAC Number. While in I.B.C., use Instructor Training Course A-012-0011.		
c. Lesson Topic: This will correspond to the number and title specified in the curriculum outline	Provide additional examples if necessary	
(1) Number assigned by unit and lesson topic within the unit. Example: 1.2 Lesson topic Unit		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
contained in the corresponding curriculum outline lesson topic page).		
f. Instructional Materials: Instructional materials which the instructor/student may use for preparation or during instruction will be listed. Consist of four subcategories; Instructional References, Instructional Aids, Texts, and Instruction Sheets.	If there is no entry, enter "NONE".	
(1) Instructional References; all source material from which		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
the instructor is to gather information to support the learning objectives. List military publications first, in order of seniority, then list the civilian publications. List the military identification number/civilian author, title (underline), chapter and page/paragraph number in appropriate. (2) Instructional Aids: All equipment and audiovisual aids		

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

necessary to conduct the lesson. These should be grouped and headed by sub-category titles such as Training Equipment, Transparencies, Flock Cards, Film/Film Guide Sheet, Video Tapes, etc.

(3) Texts: All reference material provided for student use such as the Student Guide or a required reading textbook or instruction.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

(4) Instruction Sheets: A generic term for information sheets, job sheets, job plans, assignment sheets, note-taking sheets, etc. Designed for student use.

g. Date: The date the lesson topic guide was prepared.

h. Terminal Objective: Transferred from the course curriculum outline. While in the Instructor Training Course use the behavior, condition and standard from

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
the LOAW and write a terminal objective.		
i. Enabling Objective: Transferred from the course curriculum outline. While in the Instructor Training Course use the behavior, condition and standard from the LOAW and write an enabling objective.		
j. Criterion Test: A list of written and/or performance tests against which subject comprehension will be	Do not write the test items in this space.	

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

judged. The test will be identified by course title and number, if applicable. If there is no entry, enter "NONE".

k. Homework: Written assignments, such as student activity guides, to be completed by the student.

2. Lesson Topic Guide Page Format - the main body of each LTG will follow the three-column format of OUTLINE OF INSTRUCTION, INSTRUCTOR ACTIVITY, and STUDENT ACTIVITY. This format enables the instructor to view all instructional factors at a glance. The entries in each column will be in sufficient

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
detail to guide the new instructor in the conduct of the lesson.		
a. Outline of Instruction Column	Refer students to sample format in the Student Guide	
(1) Entries in this column will cover the planned lesson discussion content.		
(2) Outline will be developed in sufficient detail so that it can be used as the instructor's primary teaching document. No further guide or lesson plan will be necessary.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(3) Major points to be covered during lesson topic are listed in full textbook narrative form, descriptive phrases, or key words as appropriate (a) facts (b) concepts (c) procedures (d) rules (e) principles (4) In the interest of economy, the outline of instruction may extend across the entire page whenever		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
no entry is required in either the instructor activity or student activity columns.		
(5) When prepared for printing, ample space should be provided throughout for instructor annotations.		
(6) Introduction - (a) developed to promote student interest (b) to motivate each student with a desire to gain a	Inform students that the following introduction format items will be demonstrated during the five-minute introduction to a lesson.	

understanding of the lesson topic

(c) to enable each student to recognize enabling objectives and their relationship to the terminal objective.

(d) The following will be accomplished.

1. Establish contact
2. State Lesson Objectives
   a. Students should be provided a copy of the lesson objectives or

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
allowed time to copy them from chalkboard/VAP. 3. Establish Readiness a. Motivating statements 1) Statements to promote student interest in learning materials contained in the lesson topic.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Lesson overview 1) Topic: 2) Major Teaching Points: (list)	Should be stated and displayed so students can place into their personal notes.	
(7) Presentation (a) All lesson material will be covered in this step. (b) The main or key points of the step shall correlate with the enabling objectives. (c) These points will be presented in sufficient detail		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
to ensure thorough and complete coverage of all learning objectives. (d) Additionally, the instructor activity column may show diagrams, text materials, audio-visual aids, and other materials supporting the instruction. (e) Each of these materials should be identified		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
adjacent to the point it supports in the outline each time its use is planned.		
(8) Summary - consists of two parts.		
(a) State of the learning objectives.	Turn to cover page and read objectives.	
(b) Major Teaching Points - List all major teaching points.	Give a brief summary of each teaching point.	
(9) Application	If no entry, enter "NONE".	
(a) Presented in a manner to cause student to apply the		

the lesson information to solve one or more realistic problems.

(b) May require either mental or physical student activity; however, every effort should be made to provide for physical activity.

(c) Job sheets will be used in the fulfillment of this step.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
1. Applies to skill lessons only		
(10) **Evaluation** (a) Purpose: To check student progress and determine the extent to which the student has accomplished the learning objectives. (b) Procedure: A list of thought-provoking questions with answers covering the instructor guide objectives and/or	While in IBC, evaluation phase will consist of (a) a check for understanding (five questions with answers) and (b) applicable progress check number and time.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
instructions to administer a progress test with a listing of the test number as identified on the cover sheet. (11) Assignment (a) Provides the assignment objective and motivates the student by emphasizing key points in the subject matter; (b) Aids the student in developing sound study methods;		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

(c) Provides good, sound reasons for accomplishing the assignment.

b. Instructor Activity Column

Provides quidance to the instructor on teaching the subject matter in the outline of instruction column.

(1) Course developer enters in this column the teaching and learning activities or behaviors which enhance and

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
encourage productive learning on the part of the student.		
(2) Course developer will also provide guidance to the instructor on maintaining student interest and participation, measuring student comprehension and planning summaries at strategic points in the lesson		
(3) The instructor may also list materials, references and enabling objectives, but such		

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OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
entries are not to be construed as meeting the requirements for entering teaching-learning activities herein.		
c. Student Activity Column Describes all planned active participation of the students during the learning process. Such desired activities shall include, but not be limited by, the following: Observing Taking notes Drawing		

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

Measuring

Designing

Describing

Identifying

Recalling

Outlining

Troubleshooting (theoretical or practical)

d. Page Numbering

(1) Lesson Topic Guides shall be numbered in lower right hand corner with the unit, lesson topic and the page as shown in example below.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(a) 1.10.5 - the one is the unit number, ten is the lesson topic number and the five is the fifth page of the topic ten.		
III. SUMMARY		
A. State the learning objectives	Turn to cover page and read objectives	
B. Major teaching points	Give brief summary of each teaching point.	Ask questions on any areas not clearly understood.
1. Definition of a LTG		
2. Definition of an IG		
3. Purposes		
4. Elements/Format		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
IV. APPLICATION - None	Remind students, they will be required to use the material presented in this lesson while preparing LTG's for each of 4 practice teaching lessons	
V. EVALUATION		
A. Check for understanding	Ask thought-provoking questions to check understanding	Answer questions
B. Lesson topic learning objectives will be measured during preparation for and instructing four practice teaching lessons		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
VI. ASSIGNMENT		
A. Study information contained in Student Guide on Information Sheet 1.9.1I and 1.10.1I.		
B. Prepare a rough Lesson Topic Guide, using the materials prepared as homework for Lessons 1.5 and 1.8, to be turned in first period of the next day.	Check lesson guides prepared by students. Return and review with students during Instructional Period to.	

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE
A-012-0011

LESSON TOPIC: 1.10 LESSON TOPIC GUIDE ANNOTATION

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 1.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVEDTRA 110, Procedures for Instructional Systems Development.

Instructional Aids:

None

Text:

1. Student Guide, pp 1.10.1.1 - 1.10.1.3

TERMINAL OBJECTIVE:

1.0 Utilizing subject matter and any appropriate reference materials, the student instructor will PLAN and WRITE lesson topic guides for practice teaching lesson requirements. The lesson topic guides must meet the requirements outlined in course instruction sheets 1.9.1I and 1.10.1I and lesson presentation guidelines provided by the Instructor Basic Course.

ENABLING OBJECTIVE:

1.10.1 Using personal notes and a course instruction sheet, ANNOTATE four lesson topic guides in preparation for teaching the subject matter content of each lesson topic guide. The annotation must enhance the learning process and comply with the guidelines in course instruction sheet 1.10.1I.

CRITERION TEST: Execute enabling objective 1.10.1 for each of four practice teaching lessons.

HOMEWORK: Read Information Sheet 1.10.1I in the Student Guide.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVIT
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives.	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		
2. Lesson overview a. Lesson Topic: Lesson Topic Guide Annotation. b. Major Teaching Points: (1) Purpose	State and display on chalkboard/VAP.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

(2) Format/elements
(3) Annotation procedures

II. PRESENTATION

A. Purpose - to provide guidance to the instructor on teaching the subject matter in the outline of instruction column.

B. Format/Elements

1. Enter in the Instructor Activity column teaching-learning activities or behaviors that enhance and encourage productive learning on the part of the student.

a. Provides a space for the instructor to insert triggering information such as "pass out work sheets," define or explain certain terms in the outline, timely use of training aids, questions, sea stories, etc.

b. Certain items may appear in this column as part of the standard format.

2. Enter in the Student Activity column planned student activities which directly contribute to student achievement of the learning objectives.

   a. Enter only activities particular to the specific lesson topic.

   b. Certain items may appear in this column as part of the standard format.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
3. Record ALL annotations adjacent to the point in the Outline of Instruction it supports in the Instructor and/or the Student Activity column.		
4. When preparing the lesson topic guide, provide ample space throughout for annotation, i.e., Introduction section, etc.		
C. Annotation Procedures		
1. Develop the Introduction		
a. Determine and record a means of gaining student interest consistent with effective learning principles, on the Lesson topic being taught.	Provide the students with examples to stimulate interest and motivate each student with a desire to obtain the Learning Objectives of the Lesson Topic.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Determine and record a means of establishing student effect for the lesson.		
(1) How will the student use the lesson material?		
(2) Why does the student need to know the lesson material.		
(3) Class must be motivated before meaningful learning can take place.		
2. Develop the Presentation	Give examples as appropriate.	
a. Determine and record examples and additional information to aid student understanding and to stimulate thought.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Develop and list questions to be asked during the lesson to assess student understanding and to stimulate thought.		
c. Key LTG's for the use of training aids, instructional materials and points of emphasis.		
(1) Points of emphasis may be keyed by the use of high-lighter pens.		
3. Develop the Summary.		
a. Record information necessary to summarize the major teaching points.		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

4. Develop the Application
   a. Record, as required, information that will assist the student in learning to perform the skill being taught.
5. Develop the Evaluation
   a. Develop and list questions to check student understanding of the major teaching points.
   b. Record information on the upcoming test.
6. Develop the Assignment
   a. Record information necessary to inform students of outside work.
   b. Emphasize key points in the assignment.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
III. SUMMARY		
A. State the Learning Objectives	Turn to cover page and read objectives.	Turn to list of Learning Objectives in Student Guide and follow instructor.
B. Review Major Teaching Points 1. Purpose 2. Format/Elements 3. Annotation procedures	Summarize the teaching points.	Ask questions on any unclear areas.
IV. APPLICATION		
A. Annotate four lesson topic guides in preparation for practice teaching lessons.		
V. EVALUATION		
A. Check for Understanding B. Execute Learning Objective 1.10.1 for each of four practice teaching lessons.	Ask questions on the major teaching points.	

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

VI ASSIGNMENT

A. Read 1.10.1I in the Student Guide.

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

Date: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.11 THE EFFECTIVE INSTRUCTOR

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 2.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVPERS 16103-C, MANUAL FOR NAVY INSTRUCTORS
2. NAVPERS 92050, INSTRUCTORS TRAINING
3. NAVTRA 10058-B, HUMAN BEHAVIOR AND LEADERSHIP
4. AFMANVAL 50-62, PRINCIPLES & TECHNIQUIES OF INSTRUCTION
5. STATON, T.F., HOW TO INSTRUCT SUCCESSFULLY
6. MAGER, R.F., DEVELOPING ATTITUDE TOWARD LEARNING

Instructional Aids:

None

Texts:

1. Student Guide Pp 1.11.1.1 - 1.11.1.6

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.11.1 While instructing practice teaching lessons, DISPLAY the professional precepts of a classroom instructor by establishing and maintaining an effective learning environment. The student's application of the following precepts will be commented on by a staff instructor using the Observation Checklist for Instructor Trainee and will have a major bearing on the overall evaluation being SAT or UNSAT.

ENABLING OBJECTIVE: (Cont'd)

a. The Instructor's Role in the Training System

b. The Responsibilities/Characteristics of the Instructor

c. The Influence of the Instructor's Attitude on Learning

d. Effective Communications Techniques

CRITERION TEST: Execute enabling objective 1.11.1

HOMEWORK: Read Information Sheet 1.11.1I in the Student Guide.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact		
1. If first meeting with the class then introduce yourself.		
2. Give any background on yourself that might be of interest.		
3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives	Turn to cover page of LTG and read objectives	
1. State and display the TO and EO's for the lesson topic.		
2. May be placed on chalkboard/VAP, student handouts or containted in the student guide.		
C. Establish Readiness		
1. Motivating statements		
a. Develop interest in lesson topic.		
b. How will the student use the lesson material?		
c. Why does the student need to know the lesson material.		
d. Class must be motivated before meaningful learning can take place.		
2. Lesson overview	State and Display on Chalkboard/VAP	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Lesson Topic; The Effective Instructor		
b. Major Teaching Points:		
(1) Instructor's Role in the Training System		
(2) The Responsibilities/ Characteristics of the Instructor		
(3) The Influence of the Instructor's Attitude on Learning		
(4) Effective Communication Techniques		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

II. **PRESENTATION**

A. Instructor's Role in the Training System

1. Develop a Thorough Knowledge of Platform Teaching Methods
2. Write Learning Objectives
3. Make and Use Effective Training Aids
4. Write and Revise Lesson Topic Guides
5. Shorten the Learning Process by ensuring that training is completed in the most expeditious manner.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

B. The Responsibilities/Characteristics of the Instructor

1. Professional Preparation
    a. Know subject matter thoroughly and keep up to date on changes.
    b. Prepare classroom for the greatest amount of learning possible.
    c. Be skilled in the use of instructional strategies (i.e., presenting subject matter in the best possible way).
    d. Keep up with new developments in education and adopt an attitude of change.
        (1) Necessary due to:
            (a) Increased complexity of equipment

OUTLINE OF INSTRUCTION | **INSTRUCTOR ACTIVITY** | **STUDENT ACTIVITY**

(b) Computer technology

(c) Better educated individuals

e. Maintain credibility by being intellectually honest at all times.

(1) Do not put out bum dope, if not sure of a point, admit it and follow-up with research. Report the results to the student.

2. Maintain Class Control and Discipline

a. Instructor must set rules early in course and maintain them.

b. Avoid arguments.

(1) They disrupt class.

(2) Jeopardize student/instructor relationship.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. Control distractions. (1) They hamper students' learning abilities. (2) They hamper instructor's teaching abilities. d. Be consistent with discipline and don't show favoritism. e. Maintain control of discussions. f. Be firm but fair. g. Detect: sleeping or drowsiness, talking, staring out window or at clock, etc. (1) Trends can show students need a break. 3. Demonstrate a willingness to accept responsibility a. Appearance - neat, clean, shined shoes, proper uniform, good posture, hair cut, shaven, no distractions on uniform		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

b. Be courteous - use proper titles, military and civilian.

c. Respect - towards senior and juniors.

d. Evaluation - should be welcomed and profited from.

e. Patience - with all learners and through cooperation show them you care.

C. The Influence of the Instructor's Attitude on Learning

1. Develop and Maintain a positive attitude.

    a. Show interest in each student.

    b. Call student by name.

    c. Be aware of his/her problems.

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

d. Discover learning difficulties and heed them.

e. Display sincerity.

f. Stimulate desire in students to learn.

g. Be enthusiastic towards subject matter.

(1) Enthusiasm is contagious.

h. Show interest in subject matter.

(1) Your interest will carry over to motivate students.

i. Maintain positive attitude toward your job, command and school.

D. Effective Communication Techniques

1. Aids for improving instructor's delivery.

OUTLINE OF INSTRUCTION

INSTRUCTOR ACTIVITY

STUDENT ACTIVITY

a. Instructor's Speech

    (1) Teach to the student, not at him.

    (2) Keep vocabulary on class level.

    (3) Define new or unfamiliar terms and abbreviations.

    (4) Pronounce, punctuate and enunciate correctly both orally and in writing.

    (5) Avoid profanity.

    (6) Avoid slang words and excessively repeating certain words over and over.

b. Instructor's Voice.

    (1) Should be conversational and natural.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

(2) Should create interest.

(3) Put life and realism in voice.

- (a) Project calmness
- (b) Project excitement
- (c) Project enthusiasm

(4) Rate of delivery

- (a) Depends on subject matter
  1. Slow for difficult subject matters.
  2. Rapid for simple subject matters.

(5) Use proper enunciation and pronunciation

- (a) For clarity and distinct meaning
- (b) Place proper emphasis on syllables

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

- (6) Volume and Pitch
  - (a) Should be varied, not monotoned, to provide emphasis.
  - (b) Should be loud enough for all to hear even over outside noise.

c. Eye Contact

- (1) Personalizes delivery - makes each student feel that he/she is being individually taught to.
- (2) Used to observe student reactions
  - (a) Questioning look, frown.
  - (b) Student comprehension.
- (3) Avoid patterns

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

(a) Vary eye contact

(b) Do not monopolize or favor one area or person

(4) Avoid talking to chalkboard/VAP or training aids.

d. Gestures - Non verbal communications

(1) Any movement of the body or part of the body which is purposeful or has a definite aim.

(2) Reveals our emotions, feelings and attitudes.

(3) Gestures paint a vivid mental picture (life size, counting, etc.)

(4) Language experts suggest certain proportions of signals in a message.

- (a) 7% - Words alone
- (b) 38% - Tone of voice and inflection
- (c) 55% - Facial expressions, posture and body gestures.

(5) Avoid distracting mannerisms - unnatural or meaningless movements

- (a) Can hamper communications (in playing with keys, change, glasses, pointer, chalk, markers, rubbing hands, or excessive pacing, etc.)

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(6) VEGAS (Acronym that is descriptive of the effective instructor) V - Voice E - Eye contact G - Gestures A - Attitude S - Speech		
III. **SUMMARY**		
A. State the Learning Objectives	Turn to cover page and read objective.	Turn to list of Learning Objectives in Student Guide and follow instructor.
B. Review Major Teaching Points	Summarize the teaching points.	Ask questions on any unclear areas

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
1. The Instructor's Role in the Training System		
2. Responsibilities/Characteristics of the Instructor		
3. Influence of Instructor's Attitude on Learning		
4. Effective Communication Techniques		
IV. **APPLICATION**		
The student will demonstrate the precepts of a classroom instructor during practice teaching lessons.		
V. **EVALUATION**		
A. Check for Understanding	Ask class questions on lesson topic subject	Answer the instructor's questions

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
B. Execute enabling objective 1.11.1 during each of the four practice teaching exercises		
VI. ASSIGNMENT		
A. Read Information Sheet 1.11.1I in Student Guide.	Emphasize that each student will be evaluated on areas covered by this lesson topic.	
B. Practice the ideas presented in this lesson topic during each practice teaching session.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054 DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE
A-012-0011

LESSON TOPIC: 1.12 STUDENT MOTIVATION

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 2.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. Hersey & Blanchard, Management of Organizational Behavior, 2nd Edition
2. Dembo, Myron H., Teaching for Learning
3. Klausmeier, Herbert J., Learning & Human Abilities, 4th Edition

Instructional Aids:

None

Text:

1. Student Guide pp 1.12.1.1-1.12.1.6

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.12.1 While instructing in a classroom environment, MOTIVATE students to attain learning objectives. Motivation principles should be applied throughout the lesson. Motivation techniques will include those recommended in course instruction sheet 1.12.1I and will be judged SAT/UNSAT by a staff instructor in accordance with lesson requirements for each practice teaching lesson.

1.12.2 Given a list of statements, SELECT the definition of motivation. 100% accuracy is required.

1.12.3 Given two lists, one containing categories of motivation and one definitions/examples, MATCH the categories of motivation with their correct definition/example. 100% accuracy is required.

1.12.4 Given two lists, one containing types of motivation and one definitions/examples, MATCH the type of motivation with a correct definition/example. 100% accuracy is required.

1.12.5 Given a list containing principles/descriptive statements, MATCH five principles of motivation with a correct descriptive statement. No more than one error is permitted.

1.12.6 Given a list of true/false statements on student motivation, IDENTIFY those ideas that will contribute to motivation by labeling each true statement with a "T". 100% accuracy is required.

CRITERION TEST: Progress Check A-012-0011-T2.

HOMEWORK: Read information sheet 1.12.1I in the Student Guide.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives.	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		
2. Lesson overview a. Lesson Topic; Student Motivation b. Major Teaching Points: (1) Definition of motivation. (2) Categories.	State and Display on Chalkboard/VAP	

(3) Types.
(4) Principles.
(5) Techniques.

II. PRESENTATION

A. Definition of motivation

1. That force within an individual that prompts him to an action.

   a. A mental force within an individual that creates within the trainee that desire to learn.

   b. A feeling of dissatisfaction about the distance between where one is, and where one would like to be.

   c. Motivation is a term meaning; A need results in a motive, the motive

Need → Motive → Drive → Action

develops into a drive,
which results in an action.

B. Categories of motivation
  1. Extrinsic
    a. An outward force working on the student.
    b. Has no inherent relationship to material to be learned.
    c. Examples.
      (1) Honorman.
      (2) Grades.
      (3) Letter of Commendation.
      (4) Promotion.
  2. Intrinsic.
    a. Not dependent on any external circumstances.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

b. Anxious to learn for sake of knowing.

c. Learning and remembering are both improved.

d. Student has interest in material being taught.

e. Goal anticipating.

C. Types of motivation.

1. Inherent.

a. That motivation which a student has prior to entering class.

(1) Continuing process of growth, every new learning affects the acquisition of future learning.

(2) Is the basis for developing new interests, attitudes, habits of conduct.

(3) Results from one's awareness of physical or emotional needs.

2. Acquired.

   a. That motivation one derives from a stimulation originating outside one's self.

   b. Instructor must create desire within the students.

      (1) Instructor must make students aware of their need to know.

D. Principles of motivation.

   1. Experiencing high stress and anxiety is associated with low performance, erratic conduct, and personality disorders.

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

2. Expecting to receive a reward for specified behavior or achievement directs and sustains attention and effort toward manifesting that behavior or achievement.

3. Non-reinforcement after a response tends to extinguish the response.

4. Expecting to receive punishment for manifesting undesirable behavior may lead to suppression of the behavior, avoidance or dislike of the situation, or avoidance and dislike for the punisher.

5. Acquiring information concerning behavior and correcting errors are associated with better performance, and more favorable attitudes toward the learning task.

6. Setting and attaining goals require learning tasks at an appropriate difficulty level.
7. Success on current learning tasks highten motivation for subsequent tasks; feelings of failure lower motivation for subsequent tasks.

E. Motivational Techniques

1. Relate a personal experience that ties into Lesson.
2. Tell a humorous story that leads into Lesson.
    - a. This can be real, or imagined.
    - b. Story should not detract from instructors prestige, nor be demeaning.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
3. Emphasize need to know of subject matter.		
4. Be enthusiastic toward class, and lesson topic.		
5. Be friendly, and sincere and show an interest in class.		
6. Emphasize Encouragement. a. Suggest Lesson will,with reasonable effort, be rewarding, and within the ability of all to accomplish.		
7. Assign questions to students in keeping with their ability to answer correctly.		
8. Give recognition (reward) whenever possible; insuring it is deserved.		
9. Stimulate friendly competition. Ensure it remains friendly. Emphasize performance.		

OUTLINE OF INSTRUCTION   INSTRUCTOR ACTIVITY   STUDENT ACTIVITY

10. Utilize curiosity, and encourage its growth.

11. Capitalize on existing interests, and develop others.

12. Arrange Learning Tasks appropriate to the ability of the students.

13. Provide for realistic goal setting.

    a. Intermediate.

    b. Long Range.

14. Assist students in evaluating their progress toward their goals.

15. Reduce tension.

16. Never emphasize the difficulty of a lesson. Avoid being negative.

17. Conclusions.

    a. Achievement motivated students.

        (1) They work hard for success.

(2) Worry little about failure.

(3) Accept goals of intermediate difficulty.

(4) Work harder than students motivated to avoid failure.

b. Students motivated to avoid failure.

(1) Worry more about failure than succeeding.

(2) Avoid goals of intermediate difficulty.

(3) Accept very easy or very difficult goals.

(a) Very easy goals can be accomplished.

(b) Very difficult goals resulting in failure can be rationalized away.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. Maslow's need priority Abraham Maslow a behavioral (Humanist) psychologist, taught at Brandeis University, Waltham, Mass. He died in 1970. Maslow pointed out that people are moved to action because of a set of needs that they strive to satisfy. The drive to satisfy these needs exist in a priority. The more basic the need, the more important it is and provides the strongest motivation. However when the need is satisfied it no longer provides motivation, the next higher need usually takes over as the motivator. These needs can best be illustrated as a pyramid, placing the most basic need on the bottom.		
1. Survival need		
a. Air, food, water and shelter.	Use pyramid to illustrate hierarchy.	
b. Students must see that it is possible to:		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

(1) Pay rent, buy groceries, buy clothing, receive medical care.

(a) Normally no problem for military.

(b) However, if the student does not think his need is satisfied, he may be motivated for things not desired in a classroom.

2. Security need

a. Freedom from harm.

b. Military protects from grosser forms of violence, disease, famine, poverty.

c. When security is threatened, panic may result and student

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVI

has typical reactions to stress. Examples: AWOL. Agression, Apathy, Regression.

(1) Fear of training.

(2) Fear of environmental factors.

(3) Fear of one's own capability.

3. Social needs

   a. Need to give and receive affection on an individual basis.

   b. Need for a stable relationship with a particular group.

   c. One of strongest needs at a new command. Looking for acceptance.

   d. May be more concerned about finding friendship than school activities.

   e. Social group may be wrong crowd.

   f. Family may cause social problems.

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

4. Self esteem need
    a. Requires recognition of talents, and abilities.
    b. Urge to be in charge.
    c. Need may be fulfilled by being top student.
    d. Usually self-respect must be maintained.
        (1) Avoid humiliation or being viewed unfavorably by other students.
5. Self-Fulfillment (Growth) need
    a. Need to excel and do more.
    b. Need to respond to challenge.
    c. Need to work at a level commensurate with one's capabilities.
    d. Need to experience pride in one's accomplishment.
    e. Need is within, not limited to

high intelligence or great ambition, but for average, and low intelligence also.

NOTE: The progression through this need pyramid may be seen as climbing a ladder, where the student experiences secure footing on one rung in order to experience the need to step up to the next higher rung.

Inability to fulfill a lower-order need or difficulty in fulfilling this need may result in stress and immature behavior.

Survival and security needs are largely dependent upon external factors. Social and status needs are dependent upon a combination of external factors and intra-personal relations with people.

Self fulfillment need is largely based on the need to respond to challenge, to feel confident to produce a meaningful product.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

Note: Separate the pyramid, leaving a gap between Security and social needs. Discuss reasons for a communication or generation gap.

The generation gap is quite evident. It occurs due to the fact that most young people have never had survival or security level needs threatened. They are normally at higher level needs. The adult often feels the survival and security level needs and attempts to communicate at these levels. The young person does not understand because he had never experienced these needs. The generation gap is nothing more than adults and young people attempting to communicate while motivated by different need levels.

III. Summary

A. State the Lesson Objectives.

Turn to the cover page and read the lesson objectives.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
B. Major Teaching Points.	Briefly summarize each teaching point.	
1. Definition of motivation.		
2. Categories of motivation.		
3. Types of motivation.		
4. Principles of motivation.		
5. Motivational Techniques.		
IV. Application		
The student will demonstrate motivational techniques during each practice teaching lesson.		
V. Evaluation.		
A. Check for understanding.	Ask thought provoking questions to check student understanding of the Lesson Topic.	
B. Progress check A-012-0011-T2 will be given Period 33.	Progress check includes	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
	Lesson 1.,6 1.9, and 1.12 Administer progress check first period of following day.	
VI. Assignment. Read assignment sheet 1.12.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

Date: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE
A-012-0011

LESSON TOPIC: 1.13 ORAL QUESTIONS AND QUESTIONING TECHNIQUES

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 3.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVPERS 92050A, Instructor Training Excerpts from a Naval Training Bulletin, Chp. 4
2. NAVPERS 16103-A, Manual for Navy Instructors
3. Klausmeir, Herbert J. Goodwin, William, Learning and Human Abilities, Fourth edition

Instructional Aids:

None

Text:

1. Student Guide pp. 1.13.1.1 - 1.13.1.10

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.13.1 With 100% accuracy SELECT, from a list, the purposes of oral questions.

1.13.2 With 100% accuracy SELECT, from a list, the characteristics of a good oral question.

1.13.3 With 100% accuracy MATCH the following types of oral questions with the correct definition/purpose/example.

a. Overhead
b. Yes-No
c. Reverse
d. Redirected
e. Multiple Answer
f. Direct

ENABLING OBJECTIVE (Cont'd)

1.13.4 With 100% accuracy MATCH the following questioning techniques with the correct definition/example/application.

a. Five-Step Questioning Technique
b. Handling Incorrect Responses
c. Calling on Non-Volunteers
d. Prompting
e. Seeking Further Clarification
f. Refocusing
g. Techniques the Instructor Should NOT use.

1.13.5 DEMONSTRATE the use of appropriate questions and questioning techniques while instructing practice teaching lessons. Oral questions and questioning techniques will be judged SAT/UNSAT by a staff instructor in accordance with guidelines outlined in course Instruction Sheet 1.13.1I.

CRITERION TEST: PROGRESS CHECK

HOMEWORK: Read Information Sheet 1.13.1I in the Student Guide

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.	Collect Homework Assignment from Lesson Topic 1.9	
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION (Cont'd)		
2. Lesson Overview	State and Display on Chalkborad/VAP	
a. Lesson Topic; Oral Questions and Questioning Techniques		
b. Major Teaching Points:		
1) Purposes for asking oral questions		
2) Characteristics of a good oral question		
3) Types of oral question		
4) Techniques/definitions/examples/application		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

II. PRESENTATION

- A. Purposes for asking oral questions
  - 1. Stimulate thought
    - a. The primary purpose
    - b. Requires the student to recall, analyze, compare and interpret.
  - 2. Establish class level
    - a. Determine student background
    - b. Determine student achievement level
  - 3. Arouse interest
    - a. In the subject matter
    - b. Aid in motivation
  - 4. Focus attention
    - a. Emphasize subject matter areas
    - b. Prevent wandering

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
5. Review subject matter		
a. Reinforce the learning process		
b. Evaluate the students understanding		
6. Drill students on subject matter by precise recalling		
7. Check comprehension		
a. Oral test of subject matter taught		
b. Check effectiveness of instruction		
8. Increase student participation		
a. Students will be more involved in the classroom if they both answer and ask questions.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
9. Increase student learning		
a. Asking questions is a good way for students to learn.		
b. Students remember longer information obtained in answer to their own questions.		
10. Develop communication skills		
a. Students have the opportunity to improve their speaking skills as they ask and answer questions.		
b. Students increase listening skills since they are actively involved in the class discussion.		
c. Develop and organize thoughts		
B. Characteristics of a good oral question		
1. Must be relevant to the subject matter and limited to only one thought.		
2. Must be brief and start with an		

interrogatory word or phrase.

Examples of interrogatory words:

HOW, WHO, WHAT, WHERE or WHEN

HOW can a Navy instructor radiate enthusiasm?

3. Must use terms that the trainees understand based on the average student

Examples:

(Poor) Which is the most important learning sense, the olfactory sense or the gustatory sense?

(Good) Which is the most important learning sense, the smell sense or the taste sense?

4. Must be phrased in such a way that it gives the desired meaning

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
Examples: (Poor) Where does the OOD stand his watch? (Good) Where does the OOD stand his watch underway?		
C. Types of Oral Questions 1. Overhead (Blanket) a. Definition--a question directed to the entire class. b. Purposes (1) To settle a group down when returning from a break. (2) May be used during the introduction. (3) Obtain general information. c. Should not be used when checking for understanding.	The purpose for each type of question are not included in the student guide. Take notes as necessary.	

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

Examples:

Who watched the game last night?

How many of you have ever saved a life?

Did anyone have instructor duty before?

2. Yes/No
   a. Definition--any question whose response is simply "Yes or No."
   b. Purpose--check for understanding when students are required to explain WHY they answered Yes or No.

Example:

Do you know the names of all the types of questions that we have discussed? Name one.

3. Reverse
   a. Definition--answering a question with a question.
   b. Purpose--to cause the student to think, make associations and discover the answer to his own question.

      Example:

      Student - Why did the chief give that order?

      Instructor - If you were in the same situation, what order would you have given?
4. Redirected
   a. Definition--instructor assigns a question asked by one student to another member of the class for answering.

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

b. Purpose

(1) Increase class involvement.

(2) Recognition for student answering question.

c. Never use this type technique unless you the instructor know the answer.

Example:

Student - Who is the Chief of Naval Operations?

Instructor - Can you answer that question for us P.O. Smith?

5. Multiple answer

a. Definition--a question that has more than one correct answer.

b. Purposes

(1) Increase student participation

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

(2) Cause students to think about the other student's answers

(3) Generates high interest level

(4) Improves listening skills

Example:

An Aviation Ordanceman performs a number of tasks.

Can you name one? Chief Jones

Another SSGT Smith

Another P.O. Brown, etc.

6. Direct

a. Definition--a question directed to a student, by name, utilizing the five-step questioning technique

b. Purposes

(1) Check for student understanding.

(2) Increase class involvement.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

(3) Focus attention on a particular point.

(4) To determine if re-teaching is necessary.

(5) Determine class level.

(6) Stimulate thought.

(7) Determine the effectiveness of instruction.

c. Example:

What is the definition of Air Traffic Control? P.O. Green.

D. Techniques/definitions/examples/application

1. Five Step Questioning Technique

a. Ask the question.

(1) Clear in meaning

(2) Containing a central thought.

(3) No trick questions.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

b. Pause

  (1) Sufficiently long enough to allow students time to think question through and arrive at the answer.

  (2) Maintain eye contact with class.

  (3) If pause is not long enough; the effectiveness of this technique is destroyed.

  (4) Most new instructors tend NOT to pause long enough.

  (5) Do NOT telegraph.

c. Assign Question

  (1) To an individual student by name.

    (a) To student taking mental liberties.

OUTLINE OF INSTRUCTION | **INSTRUCTOR ACTIVITY** | **STUDENT ACTIVITY**

(b) To break up conversation.

(c) To check understanding of an individual student.

d. Acknowledge Student Response

(1) Give credit for good answers.

(2) Give appropriate credit for partially correct answers.

(3) Be tactful in dealing with incorrect answers.

(4) Never

(a) Ridicule a students answer.

(b) Use sarcasm.

(c) Discourage students in any way.

(5) Require the student to answer so all the class can hear.

e. Repeating or Rephrasing the Student's Answer.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Should NOT be habitually practiced. The instructor should not repeat a student response automatically.		
(2) If the entire class did not hear the student response, the instructor should ask the student to repeat the response loud enough for everyone in the class to hear.		
(3) Another pattern arises when the instructor does not repeat the students response word for word but expands or modifies the student response into a correct answer.		
(4) This tends to decrease		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

student participation by discouraging students from responding directly to each other, because the instructor has already given the correct answer.

(5) If used to often, the students will learn to give simplier or less complete responses since they expect the instructor to modify their answers.

2. Handling Incorrect Student Responses
   a. When a student is incorrect, you must correct him/her.
   b. Emphasis should be placed on criticizing the response, NOT the student.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. If possible, provide the student with another opportunity to answer the question.		
d. Example: Instructor - How would you extinguish a Class C fire? P.O. Jones. P.O. Jones - Use a water fire extinguisher. Instructor - You would use a fire extinguisher, but not filled with water. Think again, what type of fire extinguisher would you use? P.O. Jones.		
3. Calling on Non-Volunteers		
a. After asking a question, the instructor should		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
frequently assign the question to a student who does not have his/her hand up.		
b. This technique will increase class involvement, attention and participation because every student in the class will know that he/she may be called on regardless of whether they volunteer (raise hand) or not.		
c. In using this technique, the instructor should ALSO assign questions to volunteers. Example: Instructor asks the class a question and assigns the question to a non-volunteer for answering.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. Prompting a. Definition--a series of hints, usually in the form of questions, used by a student who has given a weak, incorrect or an "I don't know" answer to an instructor's question. b. The student is helped to arrive at the correct answer to an instructor's question by a systematic step-by-step questioning procedure by the instructor. c. Each prompting question asked by the instructor is based on the preceding student answer. The exact questions in the prompting sequence cannot be specified, since each question		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
depends on the student's previous response.		
d. If the initial student response was partially correct, the instructor should first reinforce the correct part by telling the student what was right. Then the instructor begins to modify the incorrect part of the student's answer by asking prompting questions, until he can give the entire correct response.		
e. If the initial student answer is "I don't know", the instructor may begin by rephrasing the question or providing an example to		

eliminate any confusion, ambiguity or vagueness in the original question.

f. If the question is clear, the instructor should begin the prompting sequence. A good place to begin the sequence is by referring to material the student already knows.

g. Often the prompting questions may contain direct hints or clues to the correct answer.

h. The key to effective prompting is to begin on a simple enough level so that the student is able to relate to the material.

i. The instructor should acknowledge the final correct student response in the same manner as if the student had given the correct response the first time.

j. Example 1:

Instructor: How would you solve this D.C. circuit problem?

P.O. Jones: I don't know.

Instructor:
1. Do you know Ohms law?
2. What variables are given?
3. What is the unknown variable?

k. Do not allow the prompting technique to result in student badgering.

5. Seeking Further Clarification

a. Used when a student gives a response to an instructor's question that is poorly organized, lacking in detail or incomplete.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. The instructor does NOT provide the student with any hints (prompts), clues or additional information, but asks the student to do so.		
c. Examples: Questions an instructor asks after a student has given a weak answer. 1. What else can you add? 2. Are there any other reasons? 3. Can you state that another way?		
d. Seeking further clarification may also be used when an instructor believes the student has guessed at an answer. In this case the instructor asks the student to justify his/her answer.		

e. Example: Statements an instructor addresses to a student when the instructor thinks the student is guessing.

1. Can you restate your answer?
2. I'm not sure I understand you completely. Can you tell me why you think you are right?

6. Refocusing

a. Used when the instructor wants the student to relate a correct answer to another topic. This technique helps the student to consider the implications of his/her response within a broader framework and to note the relationships with other topics he/she has studied.

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

b. Example:

The student has correctly explained the operation of the basic jet engine. The instructor now asks the student, "Compare the operation of the basic jet engine with the operation of the four cycle engine."

7. Techniques the Instructor should NOT use.

   a. Habitually repeating one's own questions.

      (1) Refers to the habit of an instructor mechanically repeating a question before assigning the question to a student.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(2) If questions are habitually repeated by the instructor, the students will become trained NOT to listen to the first statement of the question.		
(3) Another reason questions should NOT be habitually repeated is that the instructor ignores an acceptable student behavior. A student raises his/her hand, thinking he/she has a good answer, until the question is repeated. The student lowers his hand because he/she doubts the correctness of his/her answer.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
As a result, student participation is decreased.		
(4) Before an instructor repeats or clarifies a question, the instructor should wait until a student tells the instructor he/she did not hear or understand the question.		
(5) The instructor should NOT automatically repeat a question if the student was not paying attention, since repeating the question decreases a student's listening skills.		
b. An instructor should NOT mechanically answer his/her own questions.		

(1) After the instructor asks the class a question, he/she should assign the question to a student without answering it himself/herself.

(2) Another situation: When an instructor clarifies, prompts, or refocuses a student response, the instructor must be careful NOT to answer the question.

(3) Results in a decrease of student participation: students spend less time in preparing an answer and tend to give less complete answers because the instructor

will give the correct answer.

(4) If the instructor continually answers his/her own questions, the discussion will degenerate into a lecture.

8. General Questioning Techniques

a. Maintain a friendly, natural, and conversational attitude at all times, but especially when questioning individuals.

b. Do not hesitate to say "I do not know" to a student's question - Students are alert to detect the instructor who attempts to bluff. Unknown questions can be made subject of class discussion or assigned to individuals or to small committees to report the answer at a later class.

c. Avoid group responses - group responses are often unintelligible. They lead to confusion and provide the instructor with no opportunity to check for understanding. The group response can be avoided by proper indoctrination or by ignoring the response and calling on an individual for the answer.

d. Have soft-spoken student repeat response loud enough for all to hear - the class should be made to understand that questioning is for the benefit of all and should not be confined to the instructor and the man called upon.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
e. Fit the question to the knowledge of the student - it is difficult for the instructor to realize that what is everyday knowledge to him might be completely unknown to the student. Generally, the timid souls and slow learners should be given the easier question; however, stereotyping students by excessive adherence to this principle should be avoided.		
III. SUMMARY		
A. State the learning objectives.	Turn to cover page and read learning objectives.	
B. Major teaching points.	Summarize each teaching point.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
1. Purposes for asking oral questions.		
2. Characteristics of a good oral question.		
3. Types of oral questions.		
4. Techniques/definitions/examples/application.		
IV. APPLICATION		
A. Student will employ good oral questions and techniques during each practice teaching lesson.	Place emphasis on this.	
V. EVALUATION		
A. Check for understanding.	Ask thought-provoking questions to check student understanding of this lesson topic.	Answer the instructor's questions.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
B. Progress check A-012-0011-T3 will be given Period 49.	Remind students they should practice the material presented in this lesson during each of their practice lessons.	
VI. ASSIGNMENT		
A. Read Information Sheet 1.13.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.14 INSTRUCTIONAL MEDIA (Chalkboard/Visual Aid Panel)

CLASSIFICATION: For Offical Use Only

ALLOTTED LESSON TIME: Class 1.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. Weber and Costello Co., How to Use the Chalkboard, a Guide for Instructors and Students (a pamphlet).

Instructional Aids:

None

Text:

1. Student Guide pp. 1.14.1.1 - 1.14.1.10.

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.14.1 DEMONSTRATE effective chalkboard/visual aid panel technique during practice teaching lessons. Criteria for satisfactory techniques will include the following elements as outlined in course instruction sheet 1.14.1I.

a. Preparation
b. Planned layout
c. Neatness
d. Legibility
e. Reenforcement of learning
f. Appropriateness to lesson topic

CRITERION TEST: Execute EO 1.14.1

HOMEWORK:
Read Information Sheet 1.14.1I in the Student Guide.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/ VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson overview a. Lesson Topic: INSTRUCTIONAL MEDIA (Chalkboard/Visual Aid Panel) b. Major Teaching Points: (1) Why use the CB/VAP (2) Preparation/Planning (3) Techniques	State and Display on Chalkboard/VAP	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

II. PRESENTATION

A. Why Use CB/VAP

1. The chalkboard/VAP is indispensable and probably the most frequently used training aid.
2. The chalkboard/VAP's use is limited only by the imagination of the instructor.
3. Convenient
    a. Available in most classrooms/labs/shops
    b. At any time during a lesson, may be used to:
        (1) Display terms, definitions, examples, problems, drawings and diagrams

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

        (2) Give ideas visual representations
        (3) Answer student questions
    c. Display assignments, safety precautions and other important material
    d. Students may be assigned to work problems on the CB/VAP
4. Adaptable
    a. Flexible nature allows adaptation to almost any instructional need.
    b. May be used to teach most knowledge or skill lesson.
    c. May be used in all sections of a lesson topic -- Introduction, Presentation, etc.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
5. Active a. Introduces the element of activity into the lesson, which tends to accelerate the learning process. b. Permits development of ideas as the lesson progresses. (1) Information is displayed as the lesson is discussed. (2) Student attention is immediately focused on CB/VAP. (3) Student has the feeling of having participated because he/she will have contributed ideas and		

information which has gone into the building of the CB/VAP presentation.

6. Economical
    a. Cost, stowage and upkeep are minor.
7. Disadvantages
    a. May loose contact with class
        (1) Talking excessively to the CB/VAP
        (2) Spend excessive time writing on CB/VAP without reestablishing contact with the class
        (3) Multiple erasures often are necessary

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
8. Advantages		
a. Enables the instructor to attract and focus attention of trainees on the specific point under consideration.		
b. Allows instructor to adjust the speed of the presentation to the note of student comprehension.		
c. Gives instructor certain control over notetaking.		
B. Preparation/Planning	Show as many examples as possible.	
1. Principles		
a. CB/VAP presentation should develop one point at a time and from the simple to the complex.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Example: A drawing to illustrate the operation of the steam cycle would consist of a boiler, turbine, condenser, pumps and necessary steam lines. The instructor should draw one part at a time, teaching as he/she explains the cycle rather than displaying and discussing the entire cycle at one time.		
b. CB/VAP work should develop logically		
(1) Sequence board work so that the relationship of each new item to the		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
preceding items is readily apparent.		
(2) Develop concepts, theories, procedures, diagrams and other information step-by-step and in the easiest possible order so that students will be able to understand the presentation.		
c. When possible CB/VAP work should develop climatically.		
(1) "Climatically" means that the CB/VAP work should be executed with proper timing to take full advantage of the "dramatic element" that is present in the classroom.		

(2) Do not announce beforehand what will be displayed on the CB/VAP.

(3) Having caught the attention of the class, the instructor will be able to hold it because the students will be "curious" to see what the instructor is about to display on the board.

(4) General rule: Maintain interest by working from cause to effect.

2. Step one in planning to use CB/VAP is to determine the following:

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. What parts of the lesson are important enough to emphasize by putting on the board.		
b. What diagrams/drawings can be used to get the different points of the lesson across.		
c. How the CB/VAP may be used to help students take notes.		
d. How much time the board work will require		
(1) If too time consuming, revise plan by selecting another media or placing information on board before the class begins.		
e. How will the material look on the board		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
f. How long should the material be left displayed. 3. Step two involves planning the actual layout of the board work. a. Use the Instructor Activity Column of L.T.G. to record or to key the material to be displayed on the CB/VAP, i.e. definitions, diagrams. (1) Use another sheet of paper if required. b. Decide where on the board the material will be displayed. c. Special emphasis can be achieved by use of colored chalk/markers or underlining.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. Step three requires the instructor to determine to what extent the students will participate in the CB/VAP work. a. May want students to come to the board for specific drill b. Excellent way to drill students on specific subject matter, i.e. solve circuit problems		
5. Obtain necessary materials: a. Chalk/marker(s) b. Eraser - to erase CB/VAP c. Pointer - to illustrate/emphasize sections of board work.	Display examples as they are discussed	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
d. Templates - Various types and shapes may be used.		
e. Straightedge and compasses - if straight lines and perfect circles are required this equipment may be used. If drawings are not that vital, free hand drawing is recommended.		
6. Practice the board work		
a. Purposeful planning, preparation and practice as described throughout this lesson will be reflected in the presentation of the lesson.		
b. Student learning is increased		

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

c. Helps develop instructor confidence and assurance

d. Eliminate wasted motions.

C. Techniques

1. Writing

a. Write in straight lines

b. Keep neat and legible

(1) Do not overcrowd

(2) Legible handwriting or simple type of lettering

c. Use correct spelling and grammar

d. Emphasize key points by underlining, using upper case letters, writing in bold characters or using colored chalk.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
e. Talk a little, chalk a little.		
2. Drawings		
a. Complex or large drawings		
(1) Construct prior to class		
(a) Pin prick technique	Explain Techniques.	
(b) Lead pencil		
(c) Wet board.		
(d) Projection - Overhead or opaque projector		
(2) Keep entire drawing covered until needed		
(3) If possible, uncover sections one at a time for presentation		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Other drawings		
(1) "Chalk a little - talk a little		
(2) Draw a small section, pause to explain the section. Continue until drawing is complete.		
c. Label the drawing as appropriate.		
d. Use aids to assist in making drawings, i.e. compass, straightedge etc.		
e. Use pointer to draw attention to sections of the drawing rather than using a finger.		
3. Chalk		
a. Hold correctly to prevent screeching.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

b. Chipping end helps prevent screeching. Wet chalk method can be effective.

c. Hold chalk side ways for shading large areas.

d. Two sizes
   (1) Regular
   (2) Large "railroad" use for "bold" writing

e. Two colors used for all purpose board work.
   (1) Yellow
   (2) White

f. Stow chalk when not in use to insure that it does not become a distractor.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. Use colored chalk/markers		
a. Light colors for writing and outlining.	Demonstrate colored chalk/marker usage.	
b. Dark colors for shading.		
c. Colored chalk does not erase easily and is messy wet sponge helps		
(1) Some colors do not show up well on CB.		
d. Colors can be used to differentiate between parts		
e. Gives a more vivid impression		
f. Cross-hatching also used to differentiate parts		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
5. Erase Board		
a. Keep clean		
b. Erase in up and down motion (chalkboard only). This puts chalk dust in the tray.		
c. Always erase board completely to avoid distractions.		
d. Stow erasure when not in use		
6. Pointer		
a. Arm straight and used as an extension of the body	Demonstrate pointer usage.	
b. Hand nearest to object to be pointed out should be used		
c. Do not allow arm to cross the body.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
d. Stow the pointer when not in use to insure it does not become a distractor.		
e. Use to draw attention to information of sections of a drawing.		
7. Stand to one side to avoid obstructing students' view.		
8. Avoid talking to board	Demonstrate what not to do.	
a. Practice good eye		
9. Pause frequently to:		
a. Maintain student attention		
b. Explain what you are doing		
c. Check for student reactions		
d. Check drawing from student's viewpoint		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
10. Visual Aid Panel (VAP)		
a. Alternate for chalkboard		
b. Clean - no chalk dust.		
c. Glarefree and non-yellowing		
d. Magnetic (most chalkboards also)	Demonstrate the magnetic properties	
(1) Strips, numbers, letters and various symbols are available in various colors		
e. Markers - Water color and semipermanent.		
(1) Water color - can be erased with a cloth and water.		
(2) Semi-permament - requires a cleaner and cloth or an erasure that has been treated with a cleaner.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
f. Projection screen - movies may be shown as well as marking on projected transparency diagrams.		
11. Practice	Emphasize practice is important.	
a. Quality technique can only be developed through practice		
III. SUMMARY		
A. State lesson objectives	Turn to cover page and read objectives	Follow in student guide
B. Major Teaching Points	Briefly summarize each teaching point	
1. Why use the CB/VAP		
2. Preparation/Planning		
3. Techniques		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
IV. APPLICATION - N/A		
V. EVALUATION		
A. Check for understanding	Ask thought-provoking questions to check student understanding of lesson topic	
B. Execute learning objective 1.14.1	CB/VAP Techniques will be measured during each practice lesson where the CB/VAP is utilized.	
VII. ASSIGNMENT		
A. Read Information Sheet 1.14.17 in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.15 METHODS/TECHNIQUES OF INSTRUCTION (KNOWLEDGE)

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 2.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVPERS 92050A, Instructor Training, Excerpts from Naval Training Bulletin, Part 4.
2. AF Manual 50-62, Principles and Techniques of Instruction, Chps. 18-21.
3. NAVPERS 16103C, Manual for Navy Instruc tors, Chp. 4.
4. Staton, R. F., How to Instruct Successfully, Chps. 5.

Instructional Aids:

Flock Cards
1.15.1FC Elements/Format

Texts:

1. Student Guide, pp 1.15.1.1-1.15.1.7

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.15.1 MATCH each method of teaching to its correct definition/application. No more than one error is permitted.

1.15.2 DEMONSTRATE the delivery techniques for the illustrated lecture method of teaching during practice teaching lessons. Delivery techniques will be judged SAT/UNSAT by a staff instructor in accordance with course instruction sheet outline requirements for each practice teaching lesson.

CRITERION TEST: PROGRESS CHECK ______________

HOMEWORK: Read Information Sheet 1.15.1I in the Student Guide

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact		
1. If first meeting with the class then introduce yourself.		
2. Give any background on yourself that might be of interest.		
3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives	Turn to cover page of LTG and read objectives	
1. State and display the TO and EO's for the lesson topic.		
2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.		
C. Establish Readiness		
1. Motivating statements		
a. Develop interest in lesson topic		
b. How will the student use the lesson material?		
c. Why does the student need to know the lesson material.		
d. Class must be motivated before meaningful learning can take place.		
2. Lesson overview		
a. Lesson Topic; Methods/Techniques of Instruction (Knowledge)	State and Display on Chalkboard/VAP	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Major Teaching Points: (1) Methods of Teaching (2) Delivery Techniques		
II. PRESENTATION		
A. Methods of Teaching		
1. Lecture - a true lecture is a one way oral explanation by a speaker to an audience. A satirical definition is "the transfer of information from a teacher's notes to the students' notebooks without passing through the mind of either."	Use of this method in Navy Technical Training is discouraged.	
a. Most commonly used.		
b. Used to introduce new knowledge type subject matter.		
c. Means of imparting verbal information.		
d. Allows maximum use of space and material.		

    e. Can save time if teaching to large groups.
    f. Primary disadvantage is lack of instructor and student interaction.
    g. Used frequently to supplement other methods of instruction.

2. Illustrated Lecture - a combination of two lecture method variations the teaching lecture and the illustrated talk.
    a. Teaching lecture
        (1) Instructor uses oral questions.
        (2) Students ask and answer questions.
    b. Illustrated talk
        (1) Instructor uses training aids to develop lesson.
        (2) Most common variation for Navy instructors.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(3) Increase of student understanding and retention. (a) Stimulates more physical senses. (4) Holds student interest. (5) Increases rate of learning c. This combination provides a very effective method for teaching knowledge. While here in Instructor Training this combination will be used and referred to as the Illustrated Lecture Method. Delivery techniques will be provided later in the lesson. 3. Discussion - the interchange of ideas by the students under the supervision of the instructor.		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

a. Used for:

  (1) Stimulating students to think constructively.

  (2) Sharing student personal experiences.

  (3) Means of solving problems.

b. Time required for discussion is usually unpredictable.

c. Class size normally limited to 15 or less.

d. Very stet to positive attitude development.

e. Directed/Guided/Developmental.

  (1) Discussion is initiated by the instructor.

  (2) By asking leading questions the instructor stimulates

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
and guides the student's thinking and requires them to develop the idea he desires them to learn.		
(3) Conclusion must always be reached so the student will not be confused.		
f. Examples include:		
(1) Case studies.	Refer students to 1.15.1I in the student guide for more detailed enrichment information.	
(2) Problem solving.		
(3) Incident process.		
(4) Seminar.		
(5) Role playing.		
(6) Brainstorming.		
(7) Panel-forum.		

OUTLINE OF INSTRUCTION

B. Delivery Technique for the Illustrated Lecture Method.

1. Introduction.
   - a. Establish contact.
     - (1) If it is the first meeting with class, introduce yourself.
     - (2) Give only background on yourself that might be of interest.
     - (3) After the first meeting, a simple "Good morning/afternoon" might be sufficient.
   - b. State the Lesson Objectives.
     - (1) State and display the TO and EO's
       - (a) turn to cover page of LTG and read to class.

INSTRUCTOR ACTIVITY

Stress-This is the Method to be used for all practice lessons teaching knowledge.

STUDENT ACTIVITY

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

(b) tells the student what he/she is to learn.

(2) Must be placed on chalkboard/VAP, student handouts or contained in student guide.

c. Establish Readiness.

(1) Motivating statements.

(a) Develop student interest in the lesson topic.

(b) How will the student use the lesson material?

(c) Why does the student need to know the lesson material?

(d) How will the material apply to future lesson or the student's work?

(e) Class must be motivated before meaningful learning can take place.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(f) Most students do not come to class in an automatic motivated state.		
(2) Lesson Overview (stated & displayed) (a) Lesson topic: List (b) Major teaching points. 1. List	Emphasize the importance of a good introduction. Provide an example introduction to a lesson topic.	
2. Presentation. a. Introduce the first major teaching point. b. Explain the teaching point. c. Use chalkboard/VAP or other training aids appropriate to lesson topic. d. Encourage students to ask questions. e. Ask developmental questions.	Emphasize that throughout the presentation, the instructor should practice good oral delivery techniques.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

(1) Five-step technique must be demonstrated

f. Check for understanding by asking questions.

g. Be alert for student confusion.

h. Review and summarize the teaching points (draw conclusion).

i. Proceed to next teaching point and continue above process until all teaching points have been presented.

3. Summary

a. State the lesson objectives.

(1) This alerts the student to the behavior each one should now be able to perform.

b. Major Teaching Points.

(1) State each teaching point with a brief summary for each.

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

(2) Use training aids as appropriate.

4. Application - (None Skills only)

5. Evaluation
   - a. Check for understanding.
     - (1) Prepare a list of thought-provoking questions to check student understanding of lesson topic.
     - (2) If students fail to answer questions correctly reteach as necessary.
   - b. Progress Check
     - (1) Inform students of any future testing of this material.

6. Assignment.
   - a. Make the assignment for this lesson topic.
   - b. Make any assignment necessary to prepare student for next lesson topic.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. To avoid any misunderstanding this should be written on chalkboard/VAP.		
III. SUMMARY		
A. State the Lesson Objectives.	Turn to cover page and and read the TO and EO's.	
B. Major Teaching Points.		
1. Method of Teaching.	Briefly summarize each teaching point.	
2. Delivery Techniques.		
IV. APPLICATION		
A. Student will be required to demonstrate an effective delivery technique for the Illustrated Lecture method during Practice Lesson #1 and #2.		
V. EVALUATION.		
A. Check for Understanding.	Ask thought-provoking questions check under-	Answer questions asked by the

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
	standing of lesson topic.	instructor.
B. Progress check A-012-0011-T3 will be given Period 49.		
VI. ASSIGNMENT.		
A. Read Information Sheets 1.15.1I, 1.16.1I, 1.17.1I and 1.18.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
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DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE
A-012-0011

LESSON TOPIC: 1.16 FIVE-MINUTE PRESENTATIONS

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 0.0 Periods
Lab 2.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. Instructor Training Course A-012-0011

Instructional Aids:

Training Equipment:

1. Video Recorder/Camera
2. Video Monitor

Text:

Student Guide pp. 1.16.1.1 - 1.16.1.2

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.16.1 Utilizing any appropriate subject matter approved by a staff instructor, PRESENT a Five-Minute lesson introduction specifically designed to arouse interest in a topic. Satisfactory performance will be accomplished by establishing contact, utilizing the Laws of Readiness and Effect, and by stating the topic in accordance with guidelines established in course instruction sheet 1.16.1I.

CRITERION TEST: Execute enabling objective 1.16.1

HOMEWORK: None

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		
2. Lesson overview a. Lesson Topic: FIVE-MINUTE PRESENTATION	State and Display on Chalkboard/VAP	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Major Teaching Points: (1) Specific Requirements (2) Guidelines for Introducing a Lesson Topic		
II. PRESENTATION		
A. Specific Requirements 1. Select a topic. DO NOT select a topic on sex, religion, politics or anything that could be dangerous to the human element. When in doubt obtain staff instructor approval first. 2. Write a terminal objective that supports the topic. 3. Write a minimum of one enabling objective that supports the terminal objective.	State the purposes of the five-minute introduction. 1. Aid in developing self-confidence 2. Acquaint the student instructor with delivery techniques for an effective introduction (a part of every lesson they will teach in the future).	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
NOTE: You may use the same learning objectives that you plan to use for practice teaching lesson #1. In fact you are encouraged to do this, thus allowing a practice introduction to your first lesson.	3. Permits evaluation of speaker's voice, characteristics and mannerisms. Emphasize the necessity of an effective introduction, a most critical area of the lesson topic - set the stage for learning.	
B. Guidelines for Introducing a Lesson Topic. 1. Place the following on the chalkboard/VAP. a. Name and rate/rank b. Lesson Topic c. Terminal Objective number d. Enabling Objective number(s) e. Major Teaching Point(s)		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Establish contact		
a. Greet the class and state your name and rate/rank. ("Good morning" or "good afternoon" class).		
3. State the lesson objectives		
a. Terminal and enabling objectives.		
b. Utilize the CB/VAP as necessary.		
4. Establish readiness through motivating statements.		
a. Develop an interest in the lesson topic.		
b. How will the student use the lesson material?		
c. Why does the student need to know the lesson material?		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
d. Class must be motivated before meaningful learning can take place.		
e. You will be allowed to use notes for this exercise.		
5. Give a lesson overview.	Demonstrate an effective lesson introduction.	
a. State the lesson topic		
b. State the major teaching point(s)		
III. SUMMARY		
A. State the lesson objectives	Turn to cover page and read the lesson objectives.	
B. Major teaching points	Briefly summarize each teaching point	
1. Specific requirements		
2. Guidelines for introducing a lesson topic.		
IV. APPLICATION - None		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE
A-012-0011

LESSON TOPIC: 1.17 MEASURING INSTRUCTIONAL INTENT

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 3.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVPERS 16808B, *Constructing and Using Achievement Test*
2. NAVEDTRA 106A, *Interservice Procedures for Instructional Systems Development*
3. NAVEDTRA 110, *Procedures for Instructional Systems Development*
4. Gronlund, Norman E., *Constructing Achievement Test*, 2nd Edition

Instructional Aids:

None

Text:

1. Student Guide pp.1.17.1.1-1.17.1.6

TERMINAL OBJECTIVE:

3.0 Utilizing any appropriate reference material, the student instructor will DEVELOP and WRITE a criterion test to measure the achievement of learning objectives as presented in practice teaching lessons. The criterion test items must meet the criteria outlined in course instruction sheets 1.17.1I and 1.18.1I.

ENABLING OBJECTIVE:

1.17.1 From a given list, SELECT the purposes of testing as defined in course instruction sheet 1.17.1I.

1.17.2 Provided a list of criterion-referenced and norm-referenced statements, LABEL the criterion-referenced statements with a

"CRT" and the norm-referenced statements with a "NRT". If the statement is associated equally well with both measurement systems LABEL as "BOTH". All statements must be labeled without error.

1.17.3 Given a list of the types of tests and associated definitions/purposes, MATCH each type of test with a correct definition/purpose. Only one error is permitted.

1.17.4 Given a scrambled list of statements, the student will SEQUENCE, in the order of performance, the criterion test development procedures. Sequence must comply with procedures outlined in course instruction sheet 1.17.1I.

CRITERION TEST: Progress Check A-012-0011T4

HOMEWORK: Read Information Sheet 1.17.1I in the Student Guide

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. Introduction		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives.	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		
2. Lesson overview a. Lesson Topic: Measuring Instructional Intent b. Major Teaching Points: (1) Purposes of Testing (2) Criterion-referenced vs Norm-referenced Testing	State and Display on Chalkboard/VAP	

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

(3) Types of Tests
(4) Criterion Test Development

II. PRESENTATION

A. Purposes of Testing

1. Aid in determining attainment of knowledge/skill competencies described by learning objectives. (Improve Learning)

2. Aid in increasing student motivation.
   - a. Provides short term goals.
   - b. Clarifying the learning expected.
   - c. Feedback concerning learning progress.

3. Aid in increasing student retention and transfer of learning.
   - a. Testing tends to direct learning efforts toward objectives being measured.
   - b. Provides reinforcing practice in comprehension of skills and knowledge attained.

4. Aid in increasing student self-understanding.
    a. Provide insight into things students can do well.
    b. Identifies misconceptions that need corrective action.
    c. Identifies degree of skill attained.
    d. Test should never be used as a threatening instrument. Always used to improve learning.
5. Aid in providing feedback on instructional effectiveness.
    a. Are the instructional objectives realistic?
    b. Are the methods and materials of instruction appropriate?
    c. Are learning experiences well organized?

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

B. Criterion-referenced vs Norm-referenced Testing.

1. Definitions

a. Criterion-referenced testing - test results expressed in terms of the learning task (specific knowledges and skills) that a student can or cannot perform.

EXAMPLE: The student will list all parts of the microscope and DEMONSTRATE its proper use.

b. Norm-referenced testing - test results based upon a normal distribution of scores accumulated over a period of time, and based upon a large number of students. Students compete for numerical grades and class standing.

EXAMPLE: The student is third highest in a class of thirty-five students with a numerical grade of 85.

NOTE: The terms criterion-referenced and norm-referenced refer only to the method used in interpreting test results, therefore the same test could be applied to either interpretation. Normally though:

(1). Norm-referenced tests are designed to provide a wide range of scores so reliable discrimination can be made among students. Eliminate the easy test items and favor the average difficulty test items.

(2) Criterion-referenced tests are designed to directly measure learning

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
that is relevant to learning objectives, whether or not they are easy for the student. Also, all criterion tests are diagnostic and prescriptive. Diagnostic - Identifies learner deficiencies by telling the student exactly which objectives were not achieved. Gives more information than "score was 80%." Prescriptive - Once trainee deficiencies are identified, a plan of action to overcome those deficiencies can be developed. This plan is called a "prescription."		
2. Major similarities and differences		
a. Both require learning objectives to be specified.	Discuss terms "diagnostic" and "prescriptive."	

NRT: Objectives stated in general or specific terms.

CRT: Objectives tend to be highly specific and detailed.

b. Both use a variety of types of test items.

NRT: Multiple-choice highly favored.

CRT: Less dependence on multiple-choice.

c. Both require the application of common rules for test item construction.

NRT: Emphasis is on the ability of the test items to discriminate among students.

CRT: Emphasis is on the ability of the test item to describe a specific student performance.

d. Both are constructed to fit a particular use.

NRT: Used primarily for placement and post testing.

CRT: Used primarily in pretest, progress and diagnostic testing.

e. Both provide Competition.

NRT: Between members of the class.

CRT: Between the student and the learning objectives.

C. Types of Tests

1. Pretest

a. Administered to determine the appropriate placement of an individual in an instructional program.

b. Used to determine how much of a course content the student already possesses.

c. Should be developed and administered in all individualized courses and in any group-paced course that has provisions for acceleration.

2. Progress Test

a. Administered at intervals during a course to assess instructional effectiveness and student learning.

b. Critiques of the test will be conducted using the test as a teaching device. Use examples similar to that in the test to ensure student understanding.

c. There must always be reinforcement so the student is not left in

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

doubt as to the correctness of his/her learning.

d. Written and performance tests both apply.

3. Post Test
   a. Administered after the completion of instruction to assess whether a student has mastered the learning objectives of the unit/course.
   b. Only difference from a pretest is the purpose for which the test is used.
4. Entry Level Test
   a. Administered prior to course enrollment to determine if the student possesses the necessary knowledge/skill prerequisites.
   b. Failure would suggest reassignment or some type of special training program is necessary.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

D. Criterion Test Development

NOTE: New courses and all courses undergoing a revision must use criterion testing. In criterion testing an individual's performance is compared to external criteria which are derived from an analysis of what is required to do a particular task. The measurement for each test item is on an absolute GO/NO GO BASIS.

1. Review the learning objectives
   a. Must have well defined behavior, applicable condition(s) and standard.
   b. Revise as necessary.
2. Analyze learning objectives and specify constraints which necessitate changes in the learning objective condition and standard.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

a. Time availability.

b. Degree of realism in training.

c. Degree of realism in testing.

NOTE: It makes no sense to write LO's with job-related behaviors, conditions and standards and then give a multiple-choice type test. Test must realistically describe the behavior expected of the student.

3. Write test items to measure the students achievement of the LO's.

a. A minimum of two test items should be written for each learning objective which does not require actual job performance.

b. Test items must duplicate the behavior specified in the LO.

c. Each test item should be numbered so it can be easily traced to the appropriate learning objective it measures. This provides necessary data to direct remediation.

4. Develop pass-fail performance criteria.

   a. Based on learning objective's standard.

   b. Ensure all the students perform the task in the same way and are graded on the same criteria.

5. Define environmental criteria for test administration.

   a. Test should be administered to all students under the same environmental conditions. All the following should be stabalized to the maximum extent

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

possible. (1) visibility, (2) time of day, (3) temperature, (4) test administrators attitude and (5) ventilation, etc.

b. Instructions must be clearly and simply stated and uniformly applied.

   (1) Students understand exactly what to do.

   (2) Students know the basis for grading.

c. All distractions must be minimized.

d. Equipment and tools provided as necessary.

   (1) Equipment must be restored to its preset state if used by more than one student.

e. Uniformity in testing is an absolute necessity.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
6. Provide instructions for scorer, student and test administrator. Details concerning:		
a. Test materials.		
b. Equipment.		
c. Procedures.		
d. Precautions.		
e. Written instructions for students on how to take the test.		
f. Written scoring procedures.		
III. SUMMARY		
A. State the lesson objectives.	Turn to cover page and read the lesson objectives.	
B. Major Teaching Points	Briefly summarize each teaching point.	
1. Purpose of Testing		
2. Criterion-referenced vs Norm-referenced Testing.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
3. Types of Tests		
4. Criterion Test Development		
IV. APPLICATION - N/A.		
V. EVALUATION.		
A. Check for Understanding.	Ask thought-provoking questions of class to check student understanding of lesson topic.	
B. Progress Check A-012-0011-T3 will be given Period 49.		
VI. ASSIGNMENT		
A. Read Information Sheet 1.17.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.18 TEST ITEM CONSTRUCTION

CLASSIFICATION: For Official Use Only (or applicable Security Classification)

ALLOTTED LESSON TIME: Class 2.0 Periods
Lab 1.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVEDTRA 110, Procedures for Instructional Systems Development, Phase II.

Instructional Aids:

None

Text:

1. Student Guide pp. 1.18.1.1 - 1.18.1.7

TERMINAL OBJECTIVE:

3.0 Utilizing any appropriate reference material, the student instructor will DEVELOP and WRITE a criterion test to measure the achievement of learning objectives as presented in practice teaching lessons. The criterion test items must meet the criteria outlined in course instruction sheets (1.17.1I and 1.18.1I.)

ENABLING OBJECTIVE:

1.18.1 Given the use of an instruction sheet that outlines construction hints for writing test items, WRITE test items that measure self-developed learning objectives. The test items will comply with requirements outlined in course instruction sheet 1.18.1I.

CRITERION TEST: Student's test items will be evaluated in conjunction with Practice Teaching lessons.

HOMEWORK:
Read Information Sheet 1.18.1I
in Student Guide.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material. d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson overview a. Lesson Topic: Test Item Construction	State and Display on Chalkboard/VAP	
b. Major Teaching Points: (1) Written test items (2) Performance test items		
II. Presentation		
A. Written Test Items		
1. Completion		
a. Description - A test item requiring the student to provide a response; by supplying a critical element that has been omitted from a statement.		
b. Construction		
(1) Use only one blank per sentence.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(2) Blank should appear at, or near end of sentence. (3) Insure there is only one correct and undisputed response for each blank. (4) Insure the missing item is important. EXAMPLE: GOOD: A pilot can determine compass heading by correcting for variation and ______. BAD: A ______ is a ______ ______.		

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2. Multiple Choice
   a. Description -
      (1) Consists of a question or incomplete statement (the item) followed by several possible answers.
      (2) Test item designed to measure a students's ability to interpret, discriminate, select, recall recognize and make application of learned informations.
      (3) May also be used to measure understanding, judgement and reasoning ability.

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b. Construction

(1) Determine behavior in L.O. which item is to measure.

(2) Devise a problem, question or incomplete statement requiring the student to perform the specified behavior.

(3) Include as much information as possible in the stem.

(4) Include in the item all conditions, information assumptions and details required to answer the question correctly.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(5) Develop a minimum of four plausible choices.		
(6) Use the language of the students, and the job.		
(7) Use sketches & diagrams when needed.		
(8) Place correct answer in random position throughout test.		
(9) Insure correct answers do not follow a pattern that could be easily remembered.		
(10) List numerical choices in ascending order.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(11) Do not use the article "a" as "and" at the end of the item; this tends to indicate correct choice. (12) When a negative response is desired, make this clear to the student by underlining, capitalizing and/or italicizing the negative words (NO, NOT, POOREST, LEAST, ETC.) (13) Do not use trick, or ambiguous questions.		

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(14) Do not test on unimportant details.

(15) Do not use choices such as "all of the above, "any of the above," or "none of the above."

(16) Insure there is only one correct response per item.

(17) All choices approximately same length.

3. Matching

a. Description -

(1) A type of test item used to measure a students' ability to identify, associate,

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and discriminate among things similar or related.

b. Construction

(1) All parts of a matching item should deal with a similar idea or topic.

(2) Each item should range from a minimum of five parts to a maximum of twelve.

(a) More than twelve is likely to lead to confusion.

(3) More choices should be listed in the answer column than

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
there are questions in the question column. (4) This item may consist of a labeled diagram and a list of responses. (5) All parts of the matching item should be on the same page. (a) To eliminate confusion. (6) If an answer may be used more than once, state this in the instructions. (7) Label columns		

(8) Place the column containing the longer statements on the left side of the page.

(9) Leave space for students to record their responses at the left of this column.

4. Labeling

a. Description -

(1) Labeling test items are constructed by using drawings of items which the student will identify by filling in blank spaces provided.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Construction		
(1) Prepare a drawing or diagram of item.		
(2) Draw arrows pointing to part to be identified.		
(3) At opposite end of arrow line, prepare a place for student to write the response.		
(4) Sequentially number or letter the blanks.		
(5) EXAMPLE		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

5. True-False
    a. Description - a test item consisting of a declaratory statement that is either right or wrong with provisions for marking true or false.
    b. Construction
        (1) Include only one idea in each statement.
        (2) Place the crucial element at or near end of the statement.
        (3) Avoid negatives as they tend to confuse.

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(a) Highlight negative word or phrase.

(4) Do not use double negatives, and extremely long statements.

(5) Avoid Ambiguous statements.

(6) Exercise care in using "specific determiners," and "modifiers."

(a) Specific determiners (all, more, never, always, certainly) tend to suggest an incorrect statement.

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(b) Modifiers (sometimes, generally, and usually) may suggest a correct statement.

(7) Make approximately half the items true and half false.

(a) Minimizes guessing the correct answer.

(8) Randomly distribute true and false items.

(a) To avoid patterns

c. Examples:

1. _(F)_ The volt is the unit of resistance.

2. _(T)_ Flying airplane models are usually made from balsa.

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6. Cluster True-False
    a. Description - A group of true-false test items dealing with the same topic.
    b. Usage
        (1) True-false items are adaptable to trouble-shooting situation where more than one component can cause the problem.
        (2) This type of test item requires the student to determine logically which associated component

could or could not cause the stated problem.

(3) EXAMPLE:

During a normal start up the simulated engine fires, then, the rpm immediately drops to zero. Using the diagram furnished by the instructor, circle T if the listed trouble could cause the symptoms described; circle F if the listed trouble could NOT cause the symptoms described.

(1) T F The OUT-OF-FUEL relay, K7, is not energizing.

(2) T F The MASTER-ON relay, K6, has an open pin 6.

(3) T F The FUEL VALVE OPEN relay, K10, is hung energized.

(4) T F The ENGINE FLAME relay, K12, has an open pin 4.

B. Performance Tests

1. Definition - The measurement of learning objectives that requires the students to perform a specified task. If the Learning Objective requires the student to focus a radar, or weld

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a joint, then the test item will require the student to focus a radar, or weld a joint.

2. Types of Performance Evaluation Instruments

   a. Checklist

      (1) Description - a list used by test administrator containing all the well defined steps which must be integrated or sequentially performed for a process to be successful. Safety precautions, utilization of tools, equipment, facilities,

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
etc., can be included on checklist as well as procedural steps being tested. Constant observation is required.		
(2) Construction		
(a) Devise a checklist containing all the important and essential steps and factors required for successful performance.		
(b) Includes		
1. All steps		
2. Processes		
3. Safety precautions		
4. Utilization of tools		
5. Equipment etc.		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

6. Anything necessary for the evaluation of student performance.

Evaluation Checklist (Perform Tape Reader Electrical Check and Adjustment)

Student Name: ______________________________ Date: __________

Rate: ______________________________

Problem #3 (MTRE Mk 7 Mod 2)

Step	Step Description	Step Evaluation		Description of or Comment
	"Observation"	Yes	No	
1.	Used proper documentation: OP 3751, Vol. 2, Part 4, SMP 24-7010			
2.	Installed system verification tape cartridge into tape reader--did not thread tape through tape reader mechanism			

Evaluation Checklist (Cont'd)

Problem #3 (MTRE Mk 7 Mod 2)

Step	Step Description	Step Evaluation		Description of or Comment
	"Observation"	Yes	No	
3.	Pulled two spring lifter slides (before SPALT 7664) or pinch roller spring lifter slide (after SPALT 7664) and installed special test tape with sprocket holes adjacent to front panel; pushed in two spring lifter slides (pinch roller spring lifter slide after SPALT 7664)			
4.	Installed rubber band to retain tape tension switch arm in open position			
5.	Pulled out tape reader dust cover interlock switch			

Evaluation Checklist (Cont'd)

Problem #3 (MTRE Mk 7 Mod 2)

Step	Step Description	Step Evaluation		Description of or Comment
	"Observation"	Yes	No	
6.	Inserted extender card into tape reader test point connector J2B and connected oscilloscope ground lead to extender card test point 17			
	"Code Hole 6, Pulse Width Check:		NOTE:	Instruct student to depart from SMP to cover Code Hole 6 Pulse Width ONLY
7.	Connected oscilloscope channel A signal lead to extender card test point 6			
8.	Pressed AOP POWER ON and START TEST 9000 pushbuttons			

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Fill In (1) Description - a test often used when constant observation of student performance is not necessary but a record of how student arrived at a determination/conclusion is essential in evaluating the performance. (2) Usage (a) Used by student to record an action, by writing a descriptive sentence, phrase, or word or designated form as each step or process is completed.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(3) Evaluation (a) By scorer without interpretation since student records what he/she actually does. (4) Advantage (a) Few scorers/administrators may evaluate large numbers of students. (5) Construction (a) Devise a form on which students will record information during testing. (b) Sections of form will be designated		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
for specific information to be recorded.		
(c) All factors on which the performance will be evaluated will have entry spaces for recording information.		
c. Final Product		
(1) Description - a type of test where emphasis is placed upon the final product, rather than procedures or		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
process. The student will be scored only on the quality, or quantity of the final product as it compares to a standard model. (2) Construction (a) Develop a model of the final product as a standard for evaluation. (b) Provide students in writing 1. Instructions on what they are assigned to do.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Necessary specifications.		
3. Quantity/Quality requirements.		
4. Safety factors that must be observed.		
5. Time limitations if applicable.		
6. Any necessary drawings/diagrams.		
7. Where and how they will obtain any needed tools, equipment or materials.		

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8. A course of action to take in the event of an accident. (If applicable)

9. A course of action to take in the event insurmountable difficulty is encountered in the accomplishment of assigned project.

d. Combined

(1) Description - This is an incorporation of the best features of two .

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
or more of the previously mentioned types. (a) This may be used when the process, or steps, and results are of relatively equal importance. (b) A model must be available for comparison of student's final product. (2) Construction (a) Devise the recording checklist (if necessary) (b) Devise student fill-in form (if necessary)		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(c) Develop the standard model.		
(d) Develop an objective pass - fail scoring procedure based on the learning objective's stated standard.		
III Summary		
A. State the learning objective	Turn to cover page and read Learning Objectives	
B. Major Teaching Points 1. Written test items 2. Performance test items	Summarize each Teaching Point	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
IV Application		
A. Students will write one practice test item for each type of written test items.	Instructor will critique student's work.	
B. Write a Criterion Test for an assigned practice teaching lesson.		
V Evaluation		
A. Check for understanding	Ask thought-provoking questions to check student understanding of Lesson Topic.	
B. Student-developed test items will be evaluated in conjunction with Practice Teaching Lessons.	Lessons 1.13, 1.14, 1.15, 1.17, and 1.18 will be covered on the progress check.	
C. Progress check A-012-0011T3 will be given period 49.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
VI Assignment A. Read Information Sheets 1.18.1I and 1.19.1I in Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.19 STUDENT FACTORS AFFECTING LEARNING

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 2 Periods
Lab 0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVPERS 16103-C, Manual for Navy Instructors, Chap. 2
2. Overseas Diplomacy Manual
3. Biehler, Robert F., Psychology Applied to Teaching
4. Klausmeier, Herbert J., and Goodwin, William, Learning and Human Abilities, 4th Edition.

Instructional Aids:

Transparencies:

1. 1.19.1XP Senses
2. 1.19.2XP Sense of Sight
3. 1.19.3XP Sense of Hearing
4. 1.19.4XP Sense of Taste
5. 1.19.5XP Sense of Smell
6. 1.19.6XP Sense of Touch
7. 1.19.7XP Sense of Kinesthesia
8. 1.19.8XP - 1.19.10XP Individual Differences
   1.19.12XP Emotional Differences

Text:

1. Student Guide pp. 1.19.1.1 - 1.19.1.9

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.19.1 LIST six learning senses and CIRCLE the two most important to the majority of learning. 100% accuracy is required.

1.19.2 MATCH the common characteristics of students with a correct definition/example/application. No more than one error is permitted.

1.19.3 From a given list, MATCH the areas of individual differences among students to a correct definition/example/application. No more than two errors are permitted.

1.19.4 MATCH the effects of individual differences in a classroom to a correct example/procedure/application to be followed in handling individual differences. 100% accuracy is required.

1.19.5 LIST the two causes of individual differences with 100% accuracy.

1.19.6 LIST, from memory, a minimum of five general rules to follow when instructing foreign students.

CRITERION TEST: Progress Check A-012-0011-T4

HOMEWORK: Read Information Sheet 1.19.1I in Student Guide.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact		
1. If first meeting with the class then introduce yourself.		
2. Give any background on yourself that might be of interest.		
3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives	Turn to cover page of LTG and read objectives	
1. State and display the TO and EO's for the lesson topic.		
2. May be placed on chalkboard/ VAP, student handouts or contained in the student guide.		
C. Establish Readiness		
1. Motivating statements		
a. Develop interest in lesson topic.		
b. How will the student use the lesson material?		
c. Why does the student need to know the lesson material?		
d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson Overview	State and Display on Chalkboard/VAP	
a. Lesson Topic: STUDENT FACTORS AFFECTING LEARNING		
b. Major Teaching Points:		
(1) Learning Senses		
(2) Common Student Characteristics		
(3) Areas of Individual Differences		
(4) Handling Individual Differences		
(5) Causes of Individual Differences		
(6) Instructing Foreign Students		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
II. PRESENTATION		
A. The Learning Senses (Six Avenues of Communication)		
1. Sight 75%	Display 1.19.1XP	
a. Most important of the learning senses.		
b. Student with poor eyesight should be in front of the room.		
2. Hearing 23%	Display 1.19.2XP	
a. Second most important learning sense.	Of the six avenues of learning, sight and hearing combined constitute 98%.	
b. Students hard of hearing should be seated in front of the room.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
3. Taste	Display 1.19.3XP	
a. Least used in the Navy		
(1) One exception should be the Navy's Mess Halls.		
4. Smell	Display 1.19.4XP	
a. Not used extensively in the Navy.		
b. Can be used to detect:		
(1) Marijuana		
(2) Burned brakes or clutch		
(3) Fire		
5. Touch	Display 1.19.5XP	
a. Needed for skills.		
b. Resides on the surface of the skin.		
c. Sensitive to heat, pressure, and feeling of the skin.		

OUTLINE OF INSTRUCTION

6. Kinesthesia
    a. The sensation/perception of position, movement or tension
    b. Resides in muscles, tendons and joints and is stimulated by bodily tensions.
    c. Muscle sense
    d. Muscle coordination

B. Common Student Characteristics
  1. Belief in Maturity
      a. Students regard themselves as mature adults in an adult organization, and want to be treated as such.

INSTRUCTOR ACTIVITY

Display 1.19.6XP

Taste, smell, touch and kinesthesia constitutes 2% of learning senses. Psychologists differ as to the precise percent of each individual sense toward learning, but they all agree on the order of importance.

STUDENT ACTIVITY

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Students think they are mature. (a) Physically (b) Mentally (c) Emotionally (2) Students resent being treated as KIDS. b. Belief in maturity can be a powerful tool in the hands of a wise instructor. (1) The wise instructor will infer the class is composed of adults. (2) He/she will expect an adult's work, and will usually get it.		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

2. Desire to succeed
    a. Everyone wants to succeed; success is a pleasant sensation.
    b. Some students may assume an attitude of indifference.
        (1) Such an attitude is often a mask.
            (a) To hide true feelings.
            (b) To attract attention.
            (c) The instructor can usually determine the cause of this attitude through private conferences and in most cases, can help remove the cause.

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

c. Desire to succeed is another powerful tool in the hands of a wise instructor.

  (1) He/she will carefully explain the reason behind the task assigned because men/women work harder and longer when they know the reason why.

  (2) He/she will give praise and credit when deserved.

3. Ability to Evaluate

  a. No group is more critical than students.

  b. Students are quick to form opinions about:

    (1) The instructor

    (2) The course

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(3) The command		
c. Students are quick to detect any lack of sincerity, enthusiasm, or competence.		
(1) Students are just as quick to detect positive attributes of these qualities.		
d. Students will voice their views and opinions in no uncertain terms.		
e. The wise instructor will give no opportunity for adverse opinions.		
(1) He/she will be prepared at all times.		
(2) He/she will be systematic and positive in work.		

(3) He/she will set the example.

(4) There will be some in correct evaluations made by individuals, but mass opinion is usually a reliable evaluation.

4. Fallibility
   a. The good instructor knows that all students make mistakes.
   b. He/she should never become discouraged when students fail to progress at the rate he/she expects.
   c. He/she must remember they were once a beginner.

5. Desire for competition

a. It is natural with American people.

(1) That is why we have organized sports.

(2) That is why we take sides in any contest.

b. The instructor should try to provide controlled competition.

6. Desire for fair play

a. Also natural with Americans.

b. Fair play is essential to justice.

c. Trainees prefer firmness in a leader, if he/she is fair.

d. The instructor must insure fair play in the classroom at all times.

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

(1) No favoritism.

(2) Don't fall for the apple polisher's tricks.

(3) Equal distribution of questions among class.

(4) Equal supervision during lab, or work assignments.

e. Don't allow the eager students to dominate.

f. Don't ignore the quiet, the timid, or the reserved students.

7. Recognition

a. All students desire recognition.

b. A psychological need for all people.

c. Instructor should make assignments according to student's ability.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Give recognition when deserved.		
(2) Make certain the praise rings true with performance.		
(3) To praise poor effort undermines the instructor's credibility.		
C. Areas of Individual Differences/ Handling Individual differences	Display 1.19.7XP-1.19.16XP as appropriate	
1. Physical.		
a. Hearing, vision, etc.		
b. Tall and short students.		
c. Ensure that the obvious ones are compensated for.		

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

2. Aptitude
    a. Definition - Capacity for learning.
    b. Differences in aptitude.
        (1) Fast learner - learns very quickly.
            (a) Encourage them to read widely.
            (b) Use them as assistants (use caution).
        (2) Average learner - learns at an average rate.
            (a) The major portion of our students.
            (b) Training aids, subject matter is developed using this group as a reference.

(c) Generally does not create any problem.

(3) Slow learner - learns at a slow rate.

(a) May be slow in acquiring knowledge but fast in developing skills or the opposite may be true.

(b) Needs help individually.

(c) Praise and encourage them.

(d) Use instruction sheets.

(e) Team them with fast learners (caution).

3. Emotional.

a. Extrovert - preference for practical affairs or action.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Turns self outward.		
(2) Usually outspoken and bullish.		
(3) Tendency to create discipline problems.		
(4) Maintain control at all times.		
(5) They have a tendency to make good leaders. Utilize in class/lab activities.		
b. Introvert - preference for the imaginary or fantasy world.		
(1) Nonaggressive, shy, quiet type.		
(2) Turns self inward.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(3) Try to encourage them to answer questions and participate. (4) Treat them kindly and patiently. c. Ambivert - combination of extroversion and introversion. (1) The average student. (2) Usually poses no problems. 4. Ability a. Definition - possessing the knowledge and/or skill to perform a task. b. The levels of ability in your classroom will vary greatly because of the different educational backgrounds of your students.		

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

c. Teach on a level commensurate with the ability level of the class.

5. Geographical Differences

a. USA - students come from all areas of the country.

(1) Colloquialisms

(2) Speed of speech

(3) Accents

(4) Do NOT ridicule a student because of his/her accent or use of colloquialisms.

(5) Do NOT belittle a student because he/she grew up in a particular part of the country, i.e., Devils Lake, North Dakota; Butte, Montana, New York City, etc.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Foreign Students (1) Cultural differences (2) Language differences	NOTE: Instructing foreign students will be discussed in the last Major Teaching Point of this lesson.	
D. Causes of Individual Differences 1. Heredity a. Definition - the genetic transmission of mental and physical characteristics and potentialities from parent to offspring. b. Heredity operates to influence both the nature and the development of an individual's mental and physical abilities and characteristics. c. Examples: size, hair color,		

athletic ability, intelligence, etc.

2. Environment
    a. Definition - the combination of mental and physical conditions that affect and influence the growth and development of an individual.
    b. Socioeconomic status, peers, nutrition, religion, emotional climate, schools attended, communities lived in and many other environmental factors influence the development of an individual's mental (intelligence) and physical abilities.

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

c. Because of the complexities in measuring intelligence and environmental factors, it is impossible to come up with any definitive statement about the relative influence of heredity and environment.

d. A number of researchers feel that approximately 20 percent of the variability of intelligence is due to environmental factors.

e. The implication is that training does have influence on an individual's intelligence, regardless of whether

OUTLINE OF INSTRUCTION　　INSTRUCTOR ACTIVITY　　STUDENT ACTIVITY

the student is a slow learner, average learner or a fast learner.

E. Instructing Foreign Students

1. Foreign students attend USN schools as a result of training required to support military equipment obtained from the U.S. Under Foreign Military Sales (FMS) or to assist foreign countries (Grant Aid) in developing expertise needed for effective management and operation of its defense establishment. Refer to OPNAVINST 4750.1F for more details.

2. All foreign students, unless otherwise directed, will be evaluated using the same performance criteria as used for U.S. students.

3. The cost of sending foreign students to military schools is being paid bv the respective nations, NOT by the Department of Defense.

4. Be aware of religious affiliations/ requirements.

    a. Religious holidays or events. Refer to OPNAVINST 4950.1F for specific guidance.

   b. Some students will not be able to attend class because of religious obligations.

   c. Students also may be restricted in the tasks they are allowed to perform.

5. Determine whether the foreign student comes from a critical or non-critical society.

   a. Critical Society - a society which severely judges the conduct of its members. Usually characterized by a rigid class structure which limits/controls the mobility/interactions among its members.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Non-Critical Society - a society which is more tolerant of the behavior and conduct of its members. Characterized by social, political and economic mobility. c. Will affect the instructor's approach in dealing with foreign students. 6. Be knowledgeable of the environment variations. a. Coming from a different physical, economic, political environment will have a dramatic effect on foreign student performance.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
7. Be aware of different language or communication patterns.		
a. Oral - words used.		
(1) Word and phrases may have a different meaning to a foreign student.		
b. Mental - meaning behind the words.		
(1) Foreign students may have a different mental picture of your presentation than was was intended.	Example: When title of lesson on "Espirit de Corps" was written on C/B, foreigner thought the lesson was on ghosts (spirit of a corpse).	
c. Emotional - emphasis/use given to particular words or phrases.		
(1) Avoid the use of emotional words and topics.		

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

d. Contact societies - Some students come from societies where people are "touchers" - they get close to each other when talking. Americans are often uncomfortable in this situation.

e. Failure to take these patterns into consideration will result in needless barriers to communication between instructor and foreign student.

8. Use sign language with caution.

   a. Every country has both positive and negative gestures.

   b. A given gesture may have a positive, helpful or friendly

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
meaning for one group of foreign students but negative, derogatory or insulting to another group.		
9. Do not discuss religion, sex, or politics with foreign students.		
10. Ensure that academic and disciplinary actions involving foreign students are carried out in accordance with command policy. When in doubt contact the Command Foreign Liaison Officer and appropriate country liaison representative.		
11. Customs strange to Americans		
a. Men kissing each other or holding hands in public.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Women treated like servants.		
c. Man's (spoken) word is a bond, or contract.		
NOTE: Remember foreign students are our guests. Therefore we should be overly tolerant.		
III. SUMMARY		
A. State the lesson objectives.	Turn to the cover page and read the lesson objectives.	
B. Major Teaching Points 1. Learning Senses 2. Common student characteristics 3. Areas of individual differences 4. Handling individual differences 5. Instructing foreign students	Briefly summarize each teaching point.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
IV. APPLICATION - N/A		
V. EVALUATION		
A. Check for understanding	Ask thought-provoking questions to check student understanding of the lesson topic.	
B. Progress check ________ will be administered on ________.		
VI. ASSIGNMENT		
A. Read Information Sheet 1.19.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.20 EVALUATION OF INSTRUCTION

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 3.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVPERS 16103-C, Manual for Navy Instructors.
2. NAVEDTRA 110, Procedures for Instructional Systems Development.
3. NAVPERS 92050, Instructor Training Excerpts from Naval Training Bulletin.

Instructional Aids:

None

Text:

1. Student Guide pp. 1.20.1.1-1.20.1.27

Instruction Sheets:

1. CNET-GEN 1540/4 Instructor Evaluation Form

TERMINAL OBJECTIVE:

5.0 Utilizing the Instructor Evaluation Form CNET-GEN 1540/4 and an evaluation checklist, the student instructor will EVALUATE group-paced practice teaching lessons presented by student instructors. Evaluation procedures will comply with course instruction sheet 1.20.1I.

ENABLING OBJECTIVE:

1.20.1 LIST two purposes for evaluating instruction. 100% accuracy is required.

1.20.2 LIST six main areas to observe while evaluating instruction. Five areas must be correctly listed.

ENABLING OBJECTIVES: (Cont'd)

1.20.3 EVALUATE a classroom exercise practice teaching lesson presented by a fellow classmate. The evaluator will use Instructor Evaluation Form CNET-GEN 1540/4 and course instruction sheet 1.20.1I. Evaluation procedures will comply with criteria outlined in the course instruction sheet.

1.20.4 Using an Instructor Self-Evaluation Record, CONDUCT an instructor self-evaluation. Performance will be judged in accordance with guidelines provided with the Instructor Self-Evaluation Record.

CRITERION TEST: Progress Check A-012-0011T4.

HOMEWORK: Read information sheet 1.20.1I in the Student Guide and complete an Instructor Self-Evaluation.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson overview a. Lesson Topic; EVALUATION OF INSTRUCTION	State and Display on Chalkboard/VAP	
b. Major Teaching Points: (1) Purposes of Evaluation (2) Areas to observe (3) Classroom Instructor Evaluation (4) Instructor Self-Evaluation		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
II. PRESENTATION		
A. Purposes of Evaluation 1. Definition - continuing and systematic audit of current training programs to determine: if the training is effective, if the specific curricula aims are being accomplished and if improvements are required in any of the programs. a. Should also function as a means of appraising the achievement and growth of the individual trainees and of identifying their needs.	Information contained in the S.G. is not in outline for but is intended to provide insight into the evaluation process	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. The purpose is twofold a. Determine the effectiveness of instruction (1) Evaluate the effect of the instruction (2) How well the trainees are able to perform (3) Collect and interpret data from the following: (a) Student written testing results (b) Student performance testing results (c) Student critique sheet (d) Staff instructor comments		

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OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

b. Stimulate the improvement of instruction

  (1) Evaluations made by supervisor, a fellow instructor or as a group

    (a) Supervisor - most common.

    (b) Fellow instructor - emphasizes the point that the training program of the school is determined by a group objective

    (c) Group - participating instructors become familiar with the

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
purposes and techniques of evaluation and hence, more receptive to evaluation of their own work.		
(2) Evaluate instructor's performance		
(a) Identify and strengthen those aspects that are good		
(b) Identify weaknesses		
(c) Suggest positive ways of overcoming weaknesses		

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

(3) Use staff conferences to:

(a) Discuss major and minor problems to arrive at corrective action

(b) Decide if in-service training is required

(4) Instructor self-evaluation

(a) Instructor rates himself/herself using a standard rating device or by some other set of standards.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

(5) Continued analysis and utilization of collected data
- (a) Student critique
- (b) Staff instructor comments
- (c) Instructor analysis for improvement
- (d) Evaluation committee

B. Areas to observe
- 1. Observe and evaluate the course content
  - a. Organization of the subject matter
  - b. Review Instructor/Lesson Topic Guides
    - (1) Complete and up to date

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

2. Observe and evaluate the facilities
   a. Physical environment
      (1) Ventilation
      (2) Seating capacity
      (3) Lighting
      (4) Heating
3. Observe and evaluate the administration of rules and policies
   a. Smoking in the classroom while teaching
   b. Drinking coffee while teaching
   c. Observing general school policies

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. Observe and evaluate instructional strategies a. Teaching methods and devices (1) Adequacy of training aids (2) Were training aids effective? (3) Would another method have been more effective? 5. Observe and evaluate the instructor a. Instructor characteristics (1) Voice (a) Rate of delivery (b) Volume		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(c) Monotone		
(2) Eye contact		
(a) Maintains proper eye contact		
(3) Gestures		
(a) Purposeful		
(b) Random		
(c) Distracting		
(4) Attitude		
(a) Positive towards students		
(b) Positive toward subject matter		
(c) Sincere		
(d) Enthusiastic		
b. Enhancement of Human Values		
c. Oral questioning technique		

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

d. Training aid technique

6. Observe and evaluate the student

a. Student's reaction

(1) To the instructor

(2) To the subject matter

(3) To the instructional materials

b. Student questions

(1) Were student's questions answered by the instructor?

c. Student performance

(1) Were the students able to answer the instructor's questions?

(2) Were the students able to perform the task being taught?

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
C. Classroom Instructor Evaluation 1. Evaluation requirements a. Every instructor shall be evaluated at least four times each year within approximately 90 days lapsing between evaluations. (1) More frequent evaluation is encouraged and is necessary when inadequate instruction is observed or determined from internal feedback. b. After graduating from Instructor Training School all new instructors will		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
be evaluated monthly for six months.		
2. Timing the evaluation (Scheduled/unscheduled)		
a. Scheduled		
(1) Allows the instructor to prepare himself/herself psychologically and instructionally for the evaluation.		
(2) Sometimes could lead to a "show" rather than the instructor's typical performance.		
b. Unscheduled		
(1) Instructor performs in his/her normal mode of teaching		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(2) Can achieve a realistic appraisal of instruction.		
(3) However, the inexperienced or instructor lacking self-confidence may feel threatened and fail to perform to his/her potential.		
c. There is always the possibility that an instructor will switch from his usual performance to the accepted IT school approach for the benefit of the evaluation.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
d. Both scheduled and unscheduled evaluations should be used to achieve the advantages of each.		
e. No instructor should be evaluated during the first time he/she teaches a topic.		
3. Guide for Evaluation		
a. CNET-GEN 1540/4 Instructor Evaluation	Distribute a copy of CNET-GEN 1540/4 to each student	
(1) Contains a prepared checklist of items covering important areas of any course of instruction		
(2) The evaluation record will be prepared in triplicate. Copies to:		

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

(a) Instructor being evaluated as a basis for his/her improvement plan

(b) CIS office (if applicable)

(c) School supervisor (for use during command inspections)

(3) When an instructor is transferred outside the training command his/her evaluation records should be destroyed.

(4) Used in observing a complete lesson.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(5) Used to spot check evaluation by observing one or more specific points.		
(a) Training aids		
(b) Instructor characteristics		
(c) Instruction Sheets		
(d) Instructional Strategy		
(e) Checking student reaction		
b. Guidelines for completing CNET-GEN 1540/4	Have students follow instruction on the form provided.	
(1) Date		
(a) Enter date of the evaluation		
(2) Instructor		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(a) Enter name of instructor being evaluated (3) Grade (a) Enter grade/paygrade (4) Course (a) Enter course title (5) Unit/period (a) Enter the unit and period of the lesson being evaluated (6) Lesson topic title (a) Enter the title of the lesson being taught during the evaluation		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(7) Elements of a learning session provided by the instructor - place a check mark in the appropriate column (poor, fair, good or excellent) that reflects the instructor's performance in this area for each of the following:	Discuss the major evaluation area and each intermediate area with the class	
(a) Prepares trainee/ students for learning (b) Provides learning objectives	Advise students that information sheet 1.20.1I provides detailed guidance for marking each entry	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(c) Motivates in terms of HOW the material is to be used		
(d) Motivates in terms of WHY the material needs to be learned		
(e) Conveys enthusiasm to the trainees/students		
(f) Establishes and maintains rapport in a professional manner		
(g) Senses trainee/student needs		
(h) Holds the respect of the trainees/students		
(i) Allows trainees/students to communicate with him/her		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(j) Provides clarification, amplification and reinforcement of the learning objectives as necessary for achievement		
(8) Instructor techniques - place a check mark in the appropriate column (poor, fair, good, or excellent) that reflects the instructor's performance in each area	Discuss each area with the class	
(a) Selects and use media and/or facilities effectively		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(b) Uses instructional skills effectively		
(c) Teaches on the trainees/students level		
(d) Uses good questioning techniques		
(e) Uses a well modulated voice		
(f) Shows care in personal appearance		
(g) Demonstrates flexibility in adjusting to unplanned and extemporaneous learning situations		
(h) Displays knowledge of subject matter		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(i) Demonstrates adequate capability in utilization of learning materials		
(j) Manages time effectively		
(k) Shows evidence of careful planning of presentation		
(9) Trainee/student responses - place a check mark in the appropriate column (poor, fair, good or excellent) that reflects the instructor's performance in each area	Discuss each area with class	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(a) Evidence of trainee/student and instructor interaction		
(b) Evidence of class involvement		
(c) Evidence of attainment of learning objectives through testing		
(d) Choice and use of media and/or resources/facilities		
(e) Demonstration of self-management		
(10) General evaluation of instructor - place a check mark in the appropriate column	Discuss with class	

UTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(poor, fair, good or excellent) that reflects the instructor's overall general performance		
(11) Remarks		
(a) Entries made to emphasize qualities demonstrated by the instructor that are noteworthy excellence in performance		
(b) Entries made to suggest or provide guidance to assist the instructor in overcoming weaknesses		

(12) Instructor guide previewed
    (a) Check yes or no as applicable
(13) Signature
    (a) Evaluator signs evaluation record certifying that a critique has been performed
    (b) Enter date of evaluation
(14) Remainder of the form is to be completed by the instructor being evaluated
    (a) After reviewing the evaluation record

and having an oral critique by the evaluator, the instructor will use this area to outline a plan to improve his/her performance

(b) Instructor signs and dates the evaluation record

c. Procedures for conducting an evaluation

(1) Hold a preliminary meeting

(a) Explain purpose of evaluation

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
1. To improve on instruction quality		
(b) Discuss class/ subject matter		
(c) Determine instructor's previous experience		
(d) Become aware of any unusual situations that might affect the evaluation		
(e) Serves to put the instructor at ease		
(f) Preview instructional materials		
(2) Arrive early		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVI**

(a) Check classroom conditions

(b) Determine if there are any last minute changes in the lesson or scheduling

(c) Obtain copies of lesson guides, and other written instructional materials pertinent to the lesson

(d) Evaluator should talke his/her place in the training area with minimum distraction

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(3) Observe the instructor (a) Entire lesson or a predetermined period of time 1. A minimum of one instructional period 2. Should be determined in the preliminary meeting (b) All activities for which the instructor is responsible (c) Complete the Instructor Evaluation Record CNET-GEN 1540/4		

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

(4) Observe proper evaluator conduct

  (a) Reframe from participating in the lesson discussion. Hold comments until oral critique with the instructor

    1. Do not talk unless asked to do so

  (b) Avoid showing any displeasure or disapproval of the instructor's presentation

  (c) Be discreet in notetaking

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OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(5) Conduct an evaluator/instructor critique (a) In private (b) Immediately following the evaluation if possible (c) Use tact, be sincere, communicate a desire to help, enlist cooperation of the instructor. (d) Comment on good points as well as weaknesses 1. Avoid overstressing weaknessess		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVIT**

- 2. Give practical assistance when appropriate
- (e) If necessary arange for a follow-up interview
- (f) Close the critique on a positive tone

(6) Route the evaluation record
- (a) One to the instructor being evaluated
- (b) One to CIS (if required)
- (c) One to school supervisor

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
D. Instructor Self-evaluation		
1. A necessary adjunct to self-discipline and self-direction	Refer students to the Student Guide Information Sheet 1.20.1I and have them complete a self-evaluation may be assigned as homework if necessary	Complete a self-evaluation
2. Provides guidance to improve the instructor's effectiveness		
3. Worthless without honesty and objectivity		
4. Weigh the instructor's actual performance against what he/she considers the ideal performance		
III. SUMMARY		
A. State the lesson objectives	Turn to the cover page and read the lesson objectives	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
B. Major Teaching Points	Briefly summarize each teaching point	
1. Purposes of Evaluation		
2. Areas to observe		
3. Classroom Instructor Education		
4. Instructor Self-evaluation		
IV. APPLICATION		
A. The student will conduct evaluations of his/her fellow classmates during practice teaching exercise		
V. EVALUATION		
A. Check for understanding	Ask thought-provoking questions to check student understanding of the lesson topic	
B. Progress check A-012-0011T4		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
VI. ASSIGNMENT A. Read Information Sheet 1.20.1I in the Student Guide B. Complete an Instructor Self-evaluation if not previously accomplished		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE
A-012-0011

LESSON TOPIC: 1.21 INSTRUCTIONAL MEDIA
(TRAINING AIDS)

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 4.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVPERS 92050A, Instructor Training, Part 7
2. USCSC Pamphlet T-16, Visual Materials; Guidelines for Selection and Use in Training Situations
3. WEBER, LEWIS & HARCLROAD, A-V Instrution; Materials and Methods, Second Edition
4. WITTICH & SCHULLER, A-V Materials and Their Use, Fourth Edition
5. AFM 50-62, Principles and Techniques of Instructions, Chapter 11

Instructional Aids:

Training Equipment·

1. Overhead Projector
2. Opaque Projector
3. 8mm/16mm Movie Projector
4. 35mm Slide Projector
5. Projection Screen
6. Video Tape Player/Monitor
7. Audio Recorders/Players
8. Models/Mockups
9. Flip Chart
10. Flock Cards
11. Bulletin Board

Film:

1. MB10961 "Instructional Techniques Part IV Visual Aids"

Text:

1. Student Guide pp. 1.21.1.1 - 1.21.1.19

TERMINAL OBJECTIVE:

2.0 Utilizing appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.21.1 LIST three purposes of training aids from memory. 100% accuracy is required.

1.21.2 Given a list of statements, SELECT the characteristics of an effective training aid. 100% accuracy is required.

1.21.3 Given the two categories of training aids, MATCH each category to a correct definition/example. 100% accuracy is required.

1.21.4 Given the use of an instruction sheet, PREPARE and USE training aids and associated equipment to support practice teaching lessons. Format/use will be judged with criteria outlined in course instruction sheet 1.21.1I.

1.21.5 LIST five of seven sources for obtaining training aids. List must comply with the sources outlined in course instruction sheet 1.21.1I.

1.21.6 Given the use of an instruction sheet, DEVELOP appropriate instruction sheets for practice teaching lessons. The instruction sheets will comply with format and criteria outlined in course instruction sheet 1.21.1I.

CRITERION TEST: Progress Check A-012-0011T4

HOMEWORK: Read Information Sheet 1.21.1I in Student Guide

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact		
1. If first meeting with the class then introduce yourself.		
2. Give any background on yourself that might be of interest.		
3. After the first meeting a simple "good morning/afternoon might be sufficient.		
B. State Lesson Objectives	Turn to cover page of LTG and read objectives	
1. State and display the TO and EO's for the lesson topic.		
2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.		
C. Establish Readiness		
1. Motivating statements		
a. Develop interest in lesson topic.		
b. How will the student use the lesson material?		
c. Why does the student need to know the lesson material.		
d. Class must be motivated before meaningful learning can take place.		
2. Lesson overview		
a. Lesson Topic: Instructional Media (Training Aids)	State and Display on Chalkboard/VAP	
b. Major Teaching Points:		
(1) Purposes		
(2) Characteristics		
(3) Categories/Definitions/Examples		
(4) Preparation and Use		
(5) Sources		
(6) Develop Instruction Sheets		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
II. PRESENTATION	Show Film MB 10961 Part IV Visual Aids	
A. Purposes of training aids 1. Standardization a. Every class will be subjected to the same training aids and will receive the same information. b. Ensures that the mental images formed by observation will be similar to the actual facts the instructor wants to convey. c. Helps to activate the Law of Primacy by ensuring that a student's first learning is correct.	Use a training aid to illustrate where appropriate	

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

2. Interest
    - a. Students' attention is quickly focused and held upon the subject matter which aids to maintain the students' Readiness to learn.
    - b. Helps to activate the Law of Intensity by making the subject matter more vivid.
3. Develops understanding
    - a. Simplifies and helps to clarify difficult points of subject matter.
    - b. Aids the instructor in reaching the minds of more students through more than one sense channel.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. Helps to activate the Law of Exercise due to unchanging repetition. (1) Allows students to apply the knowledge or skills. (2) Students will learn the knowledge or skill correctly if repeated an appropriate number of times. B. Characteristics of an effective training aid 1. The training aid should be as simple as practical, yet still maintain the desired degree of accuracy in relation to the subject matter a. Realistic in relation to		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
on-the-job use and not distorted b. Simple in relation to the subject matter by displaying only that which is needed. 2. The size, video and sound should be such that everyone in the class can see and hear. a. Smallest teachable part should be visible to all. 3. Use color for emphasis a. Actual colors make a training aid more exact. b. Aids to make distinction between parts. 4. Adaptable - Training aid should		

be easily handled and be able to be used as needed.

C. Categories of Training Aids

1. Demonstrators

   a. Used by instructor to impart knowledge to his students.

   b. Any training aid the student looks at, listens to, tastes or smells to acquire knowledge.

   c. Examples:

      (1) Flock cards

      (2) Flip charts

      (3) Transparencies

      (4) Films

      (5) Oregano - can be used to simulate the smell of marijuana.

      (6) Instructional Sheets - Job Sheet Assignment Sheet,

Information Sheet, etc.

2. Manipulators
   a. Operated by students to acquire, maintain or improve skills or knowledge
   b. Examples:
      (1) Tactical Trainers
      (2) Ships Handling Tanks
      (3) Work Sheets, Problem Sheets

D. Preparation and Use
   1. Three-Dimensional Training Aids
      a. Actual equipment
         (1) Best when practical
         (2) Should be large enough for all to see
         (3) May have cut-away parts
      b. Models - Built to scale, replicas of object

UTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Use when actual equipment is too large, too small or isn't available.		
(2) Can be working, non-working, cut-away of transparent.		
(3) Shortens teaching time, provides vivid picture		
c. Mock-Ups - A three dimensional training aid designed to represent operational equipment.		
(1) Normally not constructed to scale		
(2) Built to show relationship of parts		
d. Exhibit		
(1) Combination of various training aids		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(2) Can be a model, sample of work, or damaged parts		
(3) Comparison of damaged unit to good unit provides a vivid and lasting impression for students. I.E. Exploded O_2 bottle		
e. Techniques for use of the three dimensional aids		
(1) Display the aid at the most appropriate time		
(2) Position or hold the aid at proper height and angle		
(3) Use an appropriate size pointer to direct attention to parts for an adequate length of time.	Demonstrate use of pointer	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(4) Give directions to the students when the aid is individually viewed.		
2. Flock cards		
a. Preparation		
(1) Use colors that are harmonizing and pleasing to the eye.		
(2) Size will depend on the viewing distance of the students		
(3) Shape will depend on the subject matter being presented, yet be as simple as practicable		
(4) Methods of fastening will depend on what type surface will be		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
used for mounting (a) Magnets on chalkboards with metal backing, flock or sand paper on felt boards. b. Techniques for the use of flock cards (1) Display as lesson is developed (2) Arrange the cards to provide a pleasing and uncrowded arrangement. (3) Remove all cards after maximum intensity has been gained. 3. Flip Chart		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

a. Preparation

(1) First sheet should be a cover sheet.

(2) Place a title on the chart at the top. Letters shall be a minimum of 2 inches.

(3) All labeling should be horizontal along with being spaced visually rather than mechanically and be one half the size of the title.

(4) Use dark colors with light background.

(5) Everyone in classroom must be able to see the information.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(6) Avoid confusing diagrams.		
(7) Don't mix pictorial representations and schematic symbols.		
(8) Cheap and easy to make.		
b. Techniques for the use of flip chart		
(1) Mount chart(s) on an easel.		
(2) Ensure easel lends ease in the use of the chart(s), yet does not block the chalkboards.		
(3) Avoid tapping the chart(s) and making	Explain: Use hand closest to the chart.	

random movement with pointer or hand.

(4) Remove or cover the chart(s) after they have served their purpose.

4. Posters
    a. Used to present single idea.
    b. Usually no verbal explanation required.

5. Charts and Diagrams
    a. Explanation required, draws attention to facts or ideas.
    b. Fill in stenciled letters.
    c. Avoid slanted or vertical labeling and use as few words as possible to get point across.
    d. Color coded labels are useful.
    e. May be taped to the wall/chalkboard or mounted on an easel.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

- f. When not in use they should be stored, covered or displayed in a non-distracting manner.
- g. Must be large enough for all. to see.
- h. Cheap and easy to make.

6. *Pictures
   - a. Provides over all view of object.
   - b. May not be large enough for all to see but may be passed around room, shown on opaque projector, or placed on bulletin board.
   - c. May be picture of related material which is interesting and informative.
7. Cartoons

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

a. Stimulates interest in a lesson or topic.

b. Effective in introducing a lesson topic to establish readiness, teaching safety or exposing the results of incorrect procedure.

8. Bulletin Boards
   a. Made from a wide variety of materials, cork, cardboard, etc.
   b. Available in numerous colors.
   c. Used to display notices, duty rosters, assignments, exhibits, etc.
9. Felt or Flannel Boards
   a. Available in a variety of sizes, shapes and colors.
   b. May be made from colored felt or flannel on a stiff backing.

c. Used to develop a topic as the lesson is presented.

d. The objects can be stuck to the board using felt cutouts or sandpaper-backed pictures or objects.

10. Magnetic Boards

a. Similar to the felt board in construction and use.

b. The difference is that the mounting board is covered with a sheet of thin iron plate.

c. Small magnets or magnetic tape is mounted on the back of the display material to hold it in place.

d. Magnetic paint is also available and can be brushed

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
on any smooth flat surface to provide a magnetic surface.		
e. Chalkboard/VAP may also b used as a magnetic board.		
11. Transparencies		
a. Preparation		
(1) Labeling should be no smaller than the capital letters on a typewriter.		
(2) May use more than one transparency.	Show overlay technique.	
(3) Can mask areas to develop later in the lesson.	Show masking technique.	
(4) Can be made of various colors.		
(5) May show movement by specially developed transparencies.		
(a) Polarized film		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Techniques for the use of transparencies		
(1) Avoid obstructing student's view of the screen and making random motions within the light beam.		
(2) Use a pencil or other small pointed object as a pointer and either point on the screen or lay the pointer down on the transparency.	Demonstrate the two techniques.	
(3) Turn the over head projector off when not in use. Tilt head back when not in use.	Demonstrate changing the transparencies. NOTE: Older models do NOT have a thermostatically controlled fan. Therefore, allow bulb to cool before turning the projector off.	

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

(4) Polarized transparencies must be displayed on an overhead projector equipped with a polarized attachment.

12. Film Strip
    a. Usually strip of film for one subject or topic.
    b. Shown in manually operated projector.
    c. Can show one frame at a time.
    d. Usually has sub-title to read.
    e. Some come with tapes or records.
13. Opaque Projector

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Can be used to project any opaque object.	Explain· Opaque object Demonstrate: Use of projector's operating controls and precautions to take due to internal heat and intense light of bulb.	
b. Used for a developmental device for other aids. (1) Project picture or diagram on flip chart sheet and trace the outline.		
c. Room must be completely dark.		
14. Slide Projector		
a. Used by the instructor to display slides.		
b. Used by the instructor to show still pictures or images in any sequence for any length of time desired.		
c. May be used with tapes or without.		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

d. Instructor is able to select and arrange slides shown.

e. Instructor may stop any time to discuss a slide or series of slides.

15. Audio recorder and player

a. Can be played or recorded at various speeds and on various size reels, or number of tracks.

(1) Examples: Reel to reel, cartridge, cassette.

b. Used for selective listening, individualized instruction, and with other aids.

c. Techniques for use

(1) Pre-set audio, etc.

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

(2) Safety precautions must be followed.

(3) Use speaker system capable of projecting the sound to the rear of the classroom.

16. Movie projector - Used to show 8mm and 16mm training films for a time oriented display of subject matter.
    - a. Pre-set audio and focus.
    - b. Elevate projector so that the picture is just above the heads of the students in the class.
    - c. Introduce the film/film guide.
    - d. Explain the major points to look for in the film.
    - e. Recap/discuss the major points after the film.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

17. Instructional Television/Video Tapes
    - a. Used to record skills and real life situations for play back and review.
        - (1) Students can see their mistakes, good points and make improvements without taking someones word for it.
    - b. Use to enrich a lesson and heighten students interest and understanding of the subject matter.
    - c. Use for supplemental teaching to show selected segments of a lesson demonstrated by instructor.
        - (1) Works good for a large class.
        - (2) Monitors must be placed so

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
that the entire class may view the presentation.		
d. Can be used for total teaching when no qualified instructors are available or for specialized subjects.		
(1) Disadvantages: may bore students, students cannot ask questions during telecast, etc.		
e. Useful for self-made presentations.		
18. Programmed Instruction a. Written by specialized writers.	NOTE: IIT is a course designed to train the student in all aspects of Programmed Instruction.	
b. Used for part of a lesson or course, enrichment or remediation.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
19. Techniques Common to All Training Aids a. Select and Preview (1) Check condition. (2) Become familiar with and practice using the training aid. (3) Check associated equipment to ensure proper operation, i.e. overhead, slide projector. b. Keep out of sight until needed. c. Ensure all can see. d. Introduce the training aid by discussing the major teaching points to be developed by using the training aid.		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

e. Remove from sight after use.

f. Use pointer when appropriate.

  (1) Arm straight and used as an extention of the body. Hand nearest object to pointed out should be used. Do not allow arm to cross body.

  (2) Stow pointer when not in use, i.e. place in chalk tray or hang on hook.

  (3) Do NOT stand in front of training aid.

g. Summarize/Recap the information illustrated by using the training aid.

20. Factors to Consider When Selecting Training Aids

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Simple and accurate in relation to subject matter. (1) Display only what is needed to convey vital subject matter. (2) Must be appropriate to the situation. b. Size related to visibility (1) Smallest teachable part should be visiable to all. (2) Should be easily handled. c. Nature of subject matter (1) Degree of difficulty d. Level of instruction (1) Introductory or advanced (2) Class level		

1.21.30

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

e. Quality of training aid
  (1) Very important factor
  (2) Poor training aid can be worse than no training aid at all

f. Circumstances for specific use
  (1) Expense
  (2) Availability
  (3) Complexity
  (4) Delicacy
  (5) Size
  (6) Is danger involved?

g. Use of color
  (1) Eye appealing
  (2) Used for realism, emphasis and to distinguish parts

E. Sources of Training Aids:

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

1. Chief of Navy Education and Training (CNET) or Chief of Navy Technical Training (CNT" (whichever is the next in your chain of command).
    a. Provides funding approval for course equipment requirements list (a part of the curriculum outline).
    b. Provides technical asistance.
2. Naval Education and Training Support Centers (NETSCLANT and NETSCAPAC).
    a. Located in San Diego (AV 933-889) and Norfolk (AV 690-3013).

b. Supplies materials, aids, and devices to fleet and school commands.

3. Local Command Training Facilities (TRAFAC's)

   a. Supports only the command.

   b. Capabilities depending on the size and mission of the command.

      (1) United States Film Catalog, NAVPERS 10,000 series

      (2) Training Devices Guide, NAVEXOS P-530-2

      (3) Naval Training Device Center Index of Publications, NAVSO P-1480

OUTLINE OF INSTRUCTION | **INSTRUCTOR ACTIVITY** | **STUDENT ACTIVITY**

4. School
    a. Training Aids Library
    b. Supports only the school
5. Salvage and Redistribution Centers
6. Civilian Manufactures
    a. Must be included in the Government Service Administration approved list.
    b. Items less than $1000 may be obtained through open purchase without prior approval.
7. Self-Made
    a. Limited by:
        (1) Imagination and Knowledge
        (2) Skill
        (3) Material Availability

F. Instruction Sheets

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
1. Information Sheet		
a. Consists of narrative descriptions, diagrams, sketches, charts, graphs, pictures, or other audio visual material related to the topic, but not readily available to the student.	Example: 1.21.1.11 in Student Guide.	Turn to pg 1.21.1.11 in Student Guide.
b. Format		
(1) Heading - The heading identifies the specific Information Sheet. (2) Introduction - the introduction consists of a brief statement of the purpose, scope, and value	Discuss each section of the format.	Follow instructor during the discussion, take notes and ask questions as necessary.

of the information sheet.

(3) References - The references provide complete identification of all reference material used in compiling the information.

(4) Information - Student information section shall consist of narrative descriptions, diagrams, sketches, charts, graphs, pictures, or other audio visual material, as necessary, for students' reference to support the information presented in the course.

2. Assignment Sheet

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Refers the student to learning activities such as reading, studying, observing, drill and practice.	Example: 1.21.1.13 in Student Guide.	Turn to pg 1.21.1.13 in Student Guide.
b. Initiates out-of-class activity.		
c. Format		
(1) Heading - The heading identifies the specific Assignment Sheet.	Discuss each section of the format.	Follow the instructor during the discussion, take notes and ask questions as necessary.
(2) Introduction - A statement of the purpose and scope of the assignment.		
(3) Lesson Topic Learning Objectives - The learning objectives included here		

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

are the same as for the corresponding lesson topic in the instructor guide.

(4) Study Assignment - Specific study instructions identifying paragraphs, pages, and publications. If there is a best sequence to study scattered portions of the text, the sequence is given.

(5) Study Questions - Thought-provoking questions on important portions of the assignment. Preference is given to those types of questions which require mental decisions similar to those the student would make on the job and those which

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
would measure the student's accomplishment of the learning objectives.		
3. Note-Taking Sheet	Example: 1.21.1.14 in Student Guide.	Turn to pg 1.21.1.14 in Student Guide.
a. Note-taking sheets may be needed for lessons that • provide important information to which the student must refer from time to time or recall from memory. These sheets shall conform to the format and shall contain the following essential parts.		
b. Format		
(1) Heading - The heading identifies the specific Assignment Sheet.	Discuss each section of the format.	Follow instructor during the discussion, take

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(2) References - The complete identification of all reference publications pertinent to the lesson topic.		notes and ask questions as necessary.
(3) Note-Taking Outline - An outline of the subject matter headings of the associated lesson topic guide. Adequate space is provided for the student to take notes. Items such as new definitions should be printed in their entirety.		
4. Job Sheet		
a. Provides complet information required to perform	Example: 1.21.1.15 and 1.21.1.17 in	Turn to pg 1.21.1.15 and 1.21.1.17 in

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a job, task or other unit of work involving a sequence of manipulative steps. NOTE: The development of the Job Sheet will be discussed in detail during the lesson on Methods/Techniques of Instruction (Skill), 1.23.	Student Guide.	Student Guide.
III. SUMMARY		
A. State the Learning Objectives	Turn to cover page and read objectives.	Turn to list of Learning Objectives in Student Guide and follow instructor.
B. Review Major Teaching Points	Summarize the teaching points.	Ask questions on any unclear areas.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
1. Purposes		
2. Characteristics		
3. Categories/Definitions/Examples		
4. Preparation and Use		
5. Sources		
6. Develop Instruction Sheets		
IV. **APPLICATION**		
A. The student will prepare appropriate training aids and instruction sheets for use during practice teaching lessons.		
V. **EVALUATION**		
A. Check for Understanding	Ask class questions on the Major Teaching Points.	Answer the instructor's questions. Study for test.
B. Progress Check A-012-0011T4	Administered tomorrow during the first period.	
VI. **ASSIGNMENT**		
Read Information Sheet 1.21.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.22 LESSON #2 REQUIREMENTS 30-MINUTE (KNOWLEDGE)

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 1.0 Periods
Lab 15.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. Instructor Training Course A-012-0011 Staff

Instructional Aids: None

Text:

1. Student Guide pp. 1.22.1.1 - 1.22.1.4

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.22.1 In a classroom exercise, INSTRUCT a Thirty-Minute practice teaching (knowledge) lesson using the following:

a. Indoctrination in the specific requirements for a Thirty-Minute knowledge lesson.

b. Illustrated lecture method.

c. Chalkboard/Visual Aid Panel supplemented with at least one additional training aid/device (i.e., flock card, transparency, flip chart, model, etc.)

ENABLING OBJECTIVE (Cont'd):

1.22.1

d. Self-developed learning objective(s).

e. Self-developed and annotated lesson topic guide.

f. Appropriate reference materials.

g. Appropriate instructional techniques.

h. Criterion test.

The lesson presentation will be judged SAT/UNSAT by a staff instructor in accordance with the guidelines established in course instruction sheet 1.22.1I.

CRITERION TEST: Execute Enabling Objective 1.22.1 for practice teaching lesson #2.

HOMEWORK: Prepare the necessary materials to instruct a practice teaching lesson as outlined in Information Sheet 1.22.1I.

1.22.2

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/ VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson Overview a. Lesson Topic: LESSON #2 REQUIREMENTS 30-MINUTE (KNOWLEDGE)	State and Display on Chalkboard/VAP	
b. Major Teaching Points:		
(1) Specific Requirements		
(2) Guidelines		
(3) Instructional Materials Development Checklist		
II. PRESENTATION		
A. Specific Requirements		
1. Select a topic		
a. DO NOT select a topic on sex, religion, politics or anything that could be dangerous to the human element. When in doubt obtain staff instructor approval first.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Knowledge only is to be taught.		
2. Write a terminal objective		
a. There is no requirement for the terminal objective to be met.		
b. Use information sheet 1.5.1I.		
3. Write a minimum of one enabling objective that supports the terminal objective.		
a. Sufficient number to provide between 19-24 minutes of teaching material.		
b. Enabling objective(s) must be satisfied by the lesson topic.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. Use information sheet 1.5.1I.		
4. Write a criterion test item for each EO contained within the lesson topic.		
a. Use the appropriate section of the LOAW sheet.	Identify for the students Progress Test, Test Numbering, Item Numbering.	
b. Information sheet 1.18.1I applies.		
c. Administration of test not required. Test items must be checked and approved by a staff instructor during the lab. period.		
5. Perform an objective analysis.		
a. Determine the major and minor teaching points.		
b. Use information sheet 1.8.1I.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
6. Develop a lesson topic guide (two copies) in accordance with information sheet 1.9.1I.		
a. Cover page		
(1) Provide all entries except for the Homework which will be None.		
(2) Criterion Test number will be "Progress Check" A-012-0011T1	Explain test numbering if necessary.	
b. Lesson topic elements		
(1) Introduction		
(2) Presentation		
(3) Summary		
(4) Application		
(5) Evaluation		
(6) Assignment		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
7. Develop or procure a training aid to support the accomplishment of the learning objective(s).		
a. May be a transparency, chart, poster, flock card, model, etc.		
b. List on cover page.		
8. Annotate the lesson topic guide.		
a. Use information sheet 1.10.1I.		
9. Method of instruction will be the Illustrated Lecture Method.		
10. Instruct a 30-minute practice lesson using the chalkboard/VAP and at least one other training aid to teach a knowledge only type subject matter lesson.		

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

B. Guidelines

1. Introduction must include the following areas and be presented in the prescribed sequence:

   a. Establish Contact

   b. State the lesson objectives

      (1) State and display the TO and EO's for the lesson topic.

      (2) May be placed on chalkboard/VAP, student handouts or contained in the Student Guide.

   c. Establish Readiness.

      (1) Motivating statements

      (2) Lesson Overview (stated and displayed)

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

(a) Lesson Topic

(b) Major teaching points

1. List

e. Recommended time for an effective introduction is 3-5 minutes.

2. Presentation

a. Present an organized lesson using good oral delivery techniques, examples and explanations.

b. Effectively use the chalkboard/VAP and an additional training aid to develop the lesson topic as it progresses.

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

c. Use effective oral questions and questioning techniques to maintain good class participation. Oral questions must be asked throughout the lesson.

d. Recommended time for an effective presentation is 19-24 minutes.

3. Summary

a. State the lesson objective(s).

b. Briefly summarize each major teaching point.

c. Use the chalkboard/VAP and other training aids as appropriate to summarize the lesson.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

4. Application - None.

5. Evaluation

   a. Check for understanding

      (1) Ask thought-provoking questions of the class to check for understanding of the lesson topic. List questions and answers in Outline of Instruction column.

      (2) If the students are unable to answer the questions, reteach as necessary.

   b. Complete progress check A-012-0011T1.

6. Assignment - None.

NOTE: Recommended time for the Summary, Application, Evaluation and Assignment is 3-6 minutes.

ENTIRE LESSON SHOULD BE COMPLETED WITHIN 25-35 MINUTES.

C. Instructional Materials Development Checklist

1. Prior to your practice teaching lesson date you are required to have the following items checked and approved by a staff instructor.
   a. Topic
   b. Terminal Objective
   c. Enabling Objective(s)
   d. Criterion Test Item(s)

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
e. Objective Analysis		
f. Lesson Topic Guide		
g. Annotated Lesson Topic Guide		
h. Copy of other developed material (if applicable).		
2. The following items must be provided to the staff instructor just prior to presenting your practice lesson.		
a. Instructional materials development checklist		
b. Copy of the lesson topic guide		
c. Copy of any additional materials, if applicable (i.e., instruction sheets).		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
III. SUMMARY		
A. State the lesson objective(s)	Turn to cover page and read the lesson objectives	
B. Major Teaching Points	Summarize each teaching point.	
1. Specific Requirements		
2. Guidelines		
3. Instructional Materials Development Checklist	REMIND THE STUDENTS THAT PERFECTION IS ACHIEVED THROUGH PRACTICE. SPACES ARE AVAILABLE FOR THEM TO PRACTICE PRIOR TO THEIR PERFORMANCE FOR THIS LESSON.	
IV. APPLICATION - None.		
V. EVALUATION		
A. Check for understanding	Ask thought-provoking questions of the class to check for understanding.	Answer instructor's questions

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
B. Execute Learning Objective 1.22.1 Practice teaching lessons begin ________________.		

VI. ASSIGNMENT

A. Comply with Information Sheet 1.22.1I in the Student Guide.

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

Date: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.23 LEARNING OBJECTIVE ANALYSIS (SKILL)

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 1.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. Instructor Training Course A-012-0011 Staff

Instructional Aids:

Poster:

1. 1.23.1P Learning Objective Analysis (Skill)

Text:

1. Student Guide pp. 1.23.1.1 - 1.23.1.17

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.23.1 Utilizing self-developed learning objectives and the objective analysis format for a skill objective, WRITE an objective analysis to determine major and minor teaching points for a lesson topic guide to support a practice teaching skill lesson. The objective analysis will be judged SAT/UNSAT in accordance with criteria outlined in course instruction sheet 1.23.1I.

CRITERION TEST: Execute Learning Objective 1.23.1 in preparation for practice teaching lesson #3.

HOMEWORK: Read Information Sheet 1.23.1I in the Student Guide.

MISSING MATERIAL

508

1.23.2

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
II. PRESENTATION		
A. Objective Analysis (Recommended Procedure)		
1. Transfer from LOAW the lesson EO to the top of a piece of working paper. Only one skill will be taught in any one lesson, yet you may have a compound EO.	Use 1.23.1P and illustrate the analysis process as the lesson develops. Example of a compound skill EO: "Disassemble and assemble an automatic transimmison". (Behavior only)	
2. Draw a line across the paper below the EO.	Refer students to Student Guide 1.23.1I, Page #1.23.1.2	
3. Divide the remainder of the paper in half, making two columns.		
4. Label the left half as WHAT.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
5. Label the right half as HOW. 6. Select the action/performance verb, as your teaching point. Necessary modifiers may be used for clarification. a. Place under the WHAT column. 7. Recommended process is to perform the skill, or having someone else knowledgeable in the skill perform it, in its entirety. a. Write down everything required in the performance.		

MISSING MATERIAL

1.23.5

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(For some mental skills the HOW is self-evident)		
9. List the WHAT steps under the WHAT column on the objective analysis sheet. List the HOW for each WHAT under the HOW column.		
10. The WHAT column and the HOW column contain all the necesssary information to develop the PRESENTATION element of the lesson topic guide. Include safety precautions, notes and warnings in the WHAT column of LTG. Refer to Page 1.23.1.4.	i.e. CAUTION: Listed in the step where a potential hazard exists for the student or the equipment. Not to be used to call attention to specific information. NOTE: Listed in the step where specific info is called to the attention of the student.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Move the HOW column entries under the WHAT entries they support.		
11. The WHAT column also provides the necessary STEPS to complete the Job Sheet.	Have students refer to Information Sheet 1.23.1I/1.21.1I in the Student Guide for examples.	
a. Every skill lesson must have a Job Sheet.		
b. The instructor will teach the entire skill including the WHAT and HOW in the Presentation Section. In the Application Section of the lesson the student is provided a Job Sheet that lists the steps of the skill, but the		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
student must remember the HOW.		
12. Compound skill objectives are analyzed in the same manner. You may have one teaching point for each action verb. Example: "Disassemble and assemble an automatic transmission". (Behavior only used for simplification) a. One teaching point--Dissassemble/Assemble. (1) List the WHAT and HOW of doing the Disassembly first and then the Assembly second.	Refer student to Page 1.23.1.4 for example of compound skill objective analysis.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Separate teaching points (1) First teaching point is Disassemble. (a) List all the WHAT and HOW for disassembly. (2) Second teaching point is Assemble. (a) List all the WHAT and HOW for assembly.		
13. This is a recommended procedure and will be used for all skill lessons while attending Instructor Training.	Use the chalkboard/VAP and develop an additional LO analysis as necessary. Allow for maximum student participation in the analysis development.	Assist the instructor in developing a LO analysis on a LO provided by the instructor.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
III. SUMMARY		
A. State the lesson objectives	Turn to the cover page and read the lesson objectives.	
B. Major Teaching Points	Briefly summarize the major teaching point	
1. Objective Analysis (Recommended Procedure)		
IV. APPLICATION--NONE		
V. EVALUATION		
A. Check for Understanding	Ask thought-provoking questions to check student understanding of the lesson topic.	
B. Execute EO 1.23.1 for practice teaching lesson #3.		
VI. ASSIGNMENT		
A. Read Information Sheet 1.23.1I in the Student Guide.		

OBJECTIVE ANALYSIS (SKILL)

1.23.1 Given a 35mm Canon F-1 SLR camera, 35mm film and a job sheet, the student will LOAD the camera following the prescribed steps outlined in the job sheet. The loading procedure must be completed within four minutes.

WHAT	HOW
A. Loading Procedure.	
Note film speed.	a. Write down film speed recorded as ASA number from side of film cartridge.
Pull out film rewind crank.	a. Lift crank while depressing the safety stopper. (1) Cover will rise slightly.
Open the cover.	a. Lift open unlatched cover to the extreme end of its swing. (1) Fully open.
Insert film cartridge.	a. Place cartridge in cartridge compartment. b. Extend leader part of film towards take-up spool.
Push rewind crank back into position.	a. Press down rewind crank. b. Turn it slightly either CW or CCW if it does not drop into former position.
Insert film tip into slit of film takeup spool.	a. Grasp tip of film and insert into take-up spool for about two perforations.
Turn film advance lever.	a. With thumb, gradually rotate film advance lever. (1) Lever movement will advance fully on frame rotation.

1.23.1P Sample Objective Analysis

Ensure that the film advance sprocket teeth penetrate the film perforations.	a. Press down on that part of film directly over the film directly over the film advance sprocket. b. Turn film advance lever.
Turn film rewind crank gently until film tension is felt.	a. Unfold film rewind crank. b. Turn in clockwise direction.
Close back cover.	a. Bend rubber eyacup out of path of cover. b. Fold cover over film chamber. c. Press on cover until latched.
Expose two frames.	a. Press shutter release. b. Advance film with film advance lever, rotating it 180 degrees. c. Repeat (a) and (b) again.

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING
COURSE A-012-0011

LESSON TOPIC: 1.24 METHODS/TECHNIQUES OF INSTRUCTION (SKILL)

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 2.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVPERS 16103-C, Manual for Navy Instructors, Chapter 4.
2. NAVPERS 92050, Instructor Training Excerpts from Naval Training Bulletin
3. AF Manual 50-62, Principles and Techniques of Instruction.

Flock Cards

1. 1.24.1FC Elements/Format

Video Tapes

1. VT (Sample Skill Lesson)

Text:

1. Student Guide pp. 1.24.1.1 - 1.24.1.3.

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.24.1 Given a list of skills, LABEL each as either mental or physical skill. 100% accuracy is required.

1.24.2 Given a course instruction sheet, CONSTRUCT a job sheet which will be used in the application of a practice teaching skill lesson. The job sheet format will be judged SAT/UNSAT by a staff

ENABLING OBJECTIVES: (Cont'd)

instructor in accordance with the criteria outlined in course instruction sheet 1.24.1I.

1.24.3 During a practice teaching lesson DEMONSTRATE the delivery techniques for the demonstration performance method of teaching a skill. The delivery techniques will be judged SAT/UNSAT by a staff instructor in accordance with instruction sheets 1.24.1I.

CRITERION TEST: Progress Check A-012-0011T3 and Practice Teaching Lesson #3

HOMEWORK: Read Information Sheet 1.24.1I in the Student Guide

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives.	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		
2. Lesson overview a. Lesson Topic: METHODS/TECHNIQUES OF INSTRUCTION (SKILL)	State and Display on Chalkboard/VAP	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Major Teaching Points: (1) Types of skill lessons (2) Job sheet structure (3) Demonstration Performance Method (4) Delivery techniques		
II. PRESENTATION		
A. Types of Skill Lessons		
1. Mental - the active mental processes that calls for rapid accurate, and expert performance of a task such as identifying, classifying, applying rules and problem solving.		
a. Convert Fahrenheit to centigrade	Provide additional examples as necessary.	
b. Calculate voltage drop.		
c. Compute miles per hour.		
d. Determine length of an emergency antenna	Have class offer additional examples.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
e. Classify action verbs.		
f. Identify job steps		
2. Physical - physical/manual manipulative activity that requires movement of some of the muscles of the body which are directly observable.		
a. Whip a line	Provide additional examples as necessary.	
b. Adjust distributor points		
c. Replace battery in battle lantern		
d. Don a life jacket.	Have class offer additional examples.	
B. Job Sheet Structure. Job sheets shall conform to the format of Information Sheets 1.21.1I, page 16/17 and 1.23.1I, pages 16/17. Where appropriate, provisions	Refer students to student guide.	Follow in student guide taking notes as necessary.

shall be made for the instructor's initials and date to indicate satisfactory completion of the specific task or duty during student performance. Job sheets contain the following:

1. **Heading**: Identifies the specific Job Sheet.
2. **Introduction**: A brief statement of the purpose, scope, and value of the job sheet and suggested completion time used to motivate the student to perform the skill.
3. **Lesson Topic Learning Objectives**: The enabling objective(s) to be accomplished by the student through completion of the job.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. References: Complete identification of all publications referenced in the job steps.		
5. Equipment and Materials: A listing of all equipment, tools and materials necessary for the performance of the job steps.		
6. Job Steps: Detailed procedures for performing assigned task on the system/equipment. If the job steps contained in the technical documentation used in the course are of sufficient detail, reference shall be made to the applicable section/page to perform them rather than reproducing them in this section.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Transfer "what" column from learning objective analysis.		
7. Cautions to be Observed During Accomplishment of This Job: Cautions pertaining to personnel or equipment safety are listed in the step where a potential hazard exists. NOTE: is used in the step where specific information is called to the attention of the student.		
8. Self-Test Items: Thought-provoking questions on the performance of the job steps. Given as an "open book" test, they permit the student to use information in the technical manual and other course material in		

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

arriving at the solutions, and are designed to measure the student's understanding of the procedures.

    a. Initialed by instructor.

  9. List the Job Sheet under INSTRUCTIONAL MATERIALS on the cover page in Instructional Sheets section.

C. Demonstration Performance Method

  1. Instructor Demonstration step (Required)

    a. Position students and training aids.

    b. Instructor shows and does each step slower than normal in a step-by-step sequence.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Telling and doing should be done simultaneously.		
(2) Do not hurry steps of operation.		
(3) Repeat difficult operations.		
(4) Pause briefly after each operation.		
(5) Instructor may use a well versed student or instructor to assist if necessary.		
(6) Observe SAFETY PRECAUTIONS and stress key points.		
(7) Ensure visibility of materials by all students.		

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

(8) Ask questions throughout step to check student comprehension.

(9) Use proper terminology.

2. Instructor Repetition Step (Optional)

a. Normally only required for physical skills.

b. Purpose is to show the students continuity of operation and to set standards of ease, speed and accuracy of job performance.

(1) Introduce instructor repetition step to class.

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OUTLINE OF INSTRUCTION | **INSTRUCTOR ACTIVITY** | **STUDENT ACTIVITY**

(a) Allow discussion of repetition step only after step is completed.

(2) Perform the job with the proper degree of ease, speed and accuracy.

(a) Should be in accordance with conditions and standards of objective.

(b) Streamline oral explanations so that speed of performance will not be slowed.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

        (c) Follow all safety precautions.
        (d) Allow students to ask questions at conclusion of step.
        (e) Repeat step as necessary.

3. Instructor/Student Repetition Step (Optional)
    a. Can be used for physical or mental skills.
    b. Introduce step to class.
    c. Instructor selects students who tell the instructor what to do and instructor does each step.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. Students must include key points, safety precautions, and proper sequence of doing job.		
d. Instructor may ask questions during this step.		
e. Especially useful when teaching a dangerous or complex skill, or in dealing with expensive or delicate equipment.		
4. Student Demonstration Step (one of three options required)		
a. Individual student		
(1) Introduce step to entire class.		
(2) Tell nature of step.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(3) Explain what student must do. (4) If mental skill, tell the student the problem to be solved. (5) Call average student to front of classroom. (a) Where to stand. (b) Give specific directions. (c) Put student at ease. (6) Student repeats the job steps. (7) Instructor supervises and corrects errors in a constructive fashion, but should allow the student an opportunity		

1.24.15

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

to correct his/her own errors.

(8) Mental skills student can perform at seats by providing sample problems.

b. Coach and Pupil

(1) Pair students off or put them in small groups.

(2) May designate one coach and one pupil.

(3) Pupil performs job.

(4) Coach corrects errors.

(5) Instructor supervises

(6) Useful in teaching dangerous or fragile skills.

(7) Students reverse roles and complete job again.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. Group Performance (1) Rearrange class if necessary. (2) Introduce step to class. (3) Issue materials. (4) Instructor does each step slowly explaining (a) What to do (b) How to do it (c) Stress safety (5) Students follow instructor by doing each step after the instructor does it. (6) Instructor ensures each step is accomplished, then does next step. (7) Instructor should ask questions, supervise		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
and correct errors. (8) Especially useful when teaching a dangerous or complex skill, or in dealing with expensive or delicate equipment. NOTE: The techniques of teaching skills are extremely versatile and highly effective. The number of steps employed may vary depending on the skill difficulty and ability level of the students.		
D. Delivery Techniques 1. Introduction a. Establish Contact b. State Lesson Objectives	Display appropriate flock cards for each sections as the lesson is developed.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

c. Establish Readiness

(1) Motivating statements

(2) Lesson Overview

(a) Lesson - state and display.

(b) Major teaching points - state and display.

2. Presentation

a. Knowledge portion of a skill lesson, if required.

(1) Taught prior to teaching the skill.

(2) Must be related to skill being taught.

(3) Presented as a knowledge subject using the illustrated lecture method.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Present Instructor Demonstration Step		
c. If appropriate, present instructor repetition step and/or instructor/student repetition step.		
d. Present at least one option of the student demonstration step. (1) Individual student. (2) Coach and pupil. (3) Group performance.		
e. Common pit falls of teaching a skill (1) Avoid talking/teaching to the training aids.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(2) Be sure each student is able to see the skill being performed. Re-position students if necessary.		
(3) Be sure the training aids are of appropriate size to demonstrate skill, may need a model or mock-up.		
(4) Remember students do not know how to perform the skill, therefore, be sure to demonstrate all steps very slowly.		
(5) Move L.T.G. to training aids to insure complete coverage.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
	Present an organized lesson using good oral delivery techniques, oral questions, examples analogies, associations, etc. The Instructor Demonstration Step must be used. Additionally you must use one of the options of the Student Demonstration Step Method.	
3. Summary		
a. State the lesson objectives.	Turn to cover page of LTG and read.	
b. Summarize each major teaching points.		
(1) Use training aids as appropriate.		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

4. Application
   - a. Pass out and review job sheet.
     - (1) Have students read over job sheet as it is introduced by the instructor.
     - (2) Have students take the self-test.
   - b. Verify self-test
     - (1) Instructor initials if questions are answered correctly.
   - c. Assign tools, equipment and work space.
     - (1) Simulated while in I.B.C.
     - (2) Normally will take place in the laboratory.
   - d. Supervise student activity.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
NOTE: White in I.B.C., sections "c" and "d" will be simulated.		
NOTE: Skill lessons are not realistic at I.B.C but format must be learned to apply later at individual schools.		
5. Evaluation		
a. Check for understanding		
(1) List and ask three thought-provoking questions to check student understanding of lesson topic.		
(2) Reteach as necessary.		
6. Assignment	Show 1.23.1VT sample skill lesson. (Optional)	
a. As required for this lesson or to prepare for the next lesson topic.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Display on C.B./VAP.		
III SUMMARY		
A. State the lesson objectives.	Turn to cover page and read the lesson objectives.	
B. Major Teaching Points	Briefly summarize each teaching point.	
1. Types of skill lessons		
2. Job Sheet Structure		
3. Demonstration Performance Method		
4. Delivery Techniques		
IV APPLICATION - NONE		
V EVALUATION		
A. Check for Understanding	Ask thought-provoking questions to check student understanding of the lesson topic.	
B. Progress Check A-012-0011-T5 will be give Period 121.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
C. Student demonstration of skill teaching techniques will be measured during practice teaching lesson #3.		
VI ASSIGNMENT		
A. Read Information Sheet 1.24.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054 Date: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.25 LESSON #3 REQUIREMENTS 30-MINUTE (SKILL)

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 1.0 Periods
Lab 20.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. Instructor Training Course A-012-0011 Staff

Instructional Aids:

Training Equipment:

1. Video Player
2. Video Monitor

Video Tape

1. 1.25.VT "SAMPLE LESSON"

Text:

Student Guide pp. 1.25.1.1 - 1.25.1.4

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.25.1 In a classroom exercise, INSTRUCT a Thirty-Minute practice teaching (skill) lesson using the following:
- a. Indoctrination into the specific requirements for a Thirty-Minute skill lesson.
- b. Demonstration Performance Method.
- c. Self-developed learning objectives.
- d. Self-developed and annotated lesson topic guide.
- e. Appropriate self-developed or procured media.
- f. Appropriate reference materials.
- g. Appropriate instructional techniques.
- h. Job sheet.

ENABLING OBJECTIVES (Cont'd)

The lesson presentation will be judged SAT/UNSAT by a staff instructor in accordance with the guidelines established in course instruction sheet 1.25.1I.

CRITERION TEST:

Execute Enabling Objective 1.25.1

HOMEWORK:

Prepare the necessary materials to instruct a Practice Teaching Lesson as outlined in Information Sheet 1.25.1I

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic. b. How will the student use the lesson material? c. Why does the student need to know the lesson material. d. Class must be motivated before meaningful learning can take place.		
2. Lesson Overview a. Lesson Topic; Lesson #3 Requirements 30-Minute (Skill) b. Major Teaching Points: (1) Specific Requirements (2) Guidelines (3) Instructional Materials Development Checklist	State and Display on Chalkboard/VAP	

OUTLINE OF INSTRUCTION   INSTRUCTOR ACTIVITY   STUDENT ACTIVITY

II. PRESENTATION

A. Specific Requirements

  1. Select a topic

    a. DO NOT select topic on sex, religion, politics, or anything that could be dangerous to the human element. When in doubt obtain staff instructor approval first.

    b. Mental or physical skill only.

  2. Write a terminal objective

    a. There is no requirement for the terminal objective to be met.

    b. Use information sheet 1.5.1I

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

3. Write an enabling objective that supports the terminal objective
   - a. Must be a performance that contains well defined steps of procedure
   - b. Approximately 16-21 minutes of teaching material is required.
   - c. Enabling objective must be satisfied by the lesson topic.
   - d. Information sheet 1.5.1I applies.
4. Perform an objective analysis
   - a. Determine the WHAT and HOW teaching points.
   - b. Use information sheet 1.25.1I.
5. Develop a lesson topic guide (two copies), in accordance with information sheet 1.9.1I.

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

a. Cover page

(1) Provide for all entries except for homework.

(2) Criterion test number will be "Progress Check" A-012-0011T2

b. Lesson topic elements
(1) Introduction
(2) Presentation
(3) Summary
(4) Application
(5) Evaluation
(6) Assignment

6. Develop or procure necessary training aids

a. Recommend a three-dimensional training aid for physical skill lessons

b. List on cover page

7. Develop a Job Sheet for student use

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

a. Will be used in the Application element of the LTG

b. Information sheets 1.21.1I/1.24.1I applies

c. List on cover page.

8. Annotate the lesson topic guide

a. Use information sheet 1.10.1I

9. Method of instruction: Demonstration Performance Method (Information Sheet 1.24.I applies)

a. Instructor Demonstration Step - REQUIRED

b. Instructor Repetition Step - OPTIONAL

c. Instructor/Student Repetition Step - OPTIONAL

d. Student Demonstration Step - REQUIRED

(1) Individual student

(2) Coach and pupil ONE MUST BE USED

(3) Group performnace

OUTLINE OF INSTRUCTION | INSTRUCTOR ACTIVITY | STUDENT ACTIVITY

10. Instruct a 30-minute practice teaching lesson using any necessary training aids to teach a skill, type subject matter.

B. Guidelines

1. Introduction must include the following areas and be presented in the prescribed sequence:
    a. Establish Contact
    b. State the lesson objectives
        (1) State and display the TO and EO's for the lesson topic
        (2) Must be placed on chalkboard/VAP, student handouts or contained in the Student Guide

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

- c. Establish Readiness
  - (1) Motivating statements
  - (2) Lesson Overview (stated and displayed)
    - (a) Lesson Topic
    - (b) Major teaching points
      - 1. List
- d. Recommended time for an effective introduction is 3-5 minutes

2. Presentation
   - a. Present an organized lesson using good oral delivery techniques, examples, explanations, analogies and associations
   - b. Use the chalkboard/VAP

and an additional training aid effectively as necessary to develop the lesson topic as it progresses.

c. Use effective oral questions and questioning techniques to maintain good class participation. Oral questions must be asked throughout the lesson.

d. The Instructor Demonstration Step must be used. Additionally you are required to use at least one of the optious of the Student Demonstration Step.

e. Recommended time for an effective presentation is 16-21 minutes.

3. Summary

a. State the lesson objective(s).

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Briefly summarize each major teaching point. c. Use the chalkboard/VAP as appropriate to summarize the lesson. d. Recommended time for an effective summary is 2-3 minutes.		
4. Application a. Pass out and review job sheet (1) Have students answer self-test questions b. Verify self-test (1) Instructor initials self-test if the questions are answered correctly	List items (a & d) in LTG. Emphasize steps c & d of application while here in Instructor Training due to time constraints. In actual practice this would be the laboratory session where the students would demonstrate their proficiency of the skill.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. Assign tools, equipment and work spaces d. Supervise student activity e. The students will not execute the EO due to time constraints. This only applies while attending Instructor Training. f. Recommended time for an effective application is 2-3 minutes. 5. Evaluation a. Check for understanding (1) Ask three thought-provoking questions of the class to check for understanding of		

the lesson topic. List questions and answers in Outline of Instruction Column.

(2) If the students are unable to answer the questions, reteach as necessary.

b. Complete Performance Test A-012-0011T2

6. Assignment - NONE

NOTE: Recommended time for an effective Evaluation and Assignment is 2-3 minutes.

THE ENTIRE LESSON SHOULD BE COMPLETED WITHIN 25-35 MINUTES.

Show 1.25.1VT Sample Skill Lesson

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

C. Instructional Materials Development Checklist

1. Prior to your practice teaching lesson date you are required to have the following items checked and approved by a staff instructor.
    a. Topic
    b. Terminal Objective
    c. Enabling Objective(s)
    d. Objective Analysis
    e. Job Sheet
    f. Lesson Topic Guide
    g. Annotated Lesson Topic Guide
    h. Other developed lesson materials, information sheets, problem sheets, etc., if used.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. The following items must be provided to the staff instructor just prior to presenting your practice lesson. a. Instructional materials development checklist b. Copy of the Job Sheet c. Copy of the Lesson Topic Guide d. Copy of any other developed lesson materials, if used.		
III. SUMMARY		
A. State the lesson objective(s)	Turn to the cover page and read the lesson objectives.	
B. Major Teaching Points 1. Specific Requirements	Summarize each teaching point.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Guidelines		
3. Instructional Materials Development Checklist	REMIND THE STUDENTS THAT PERFECTION IS ACHIEVED THROUGH PRACTICE. SPACES ARE AVAILABLE FOR THEM TO PRACTICE PRIOR TO THEIR PERFORMANCE FOR THIS LESSON.	
IV. APPLICATION - NONE		
V. EVALUATION		
A. Check for understanding	Ask thought-provoking questions to check student understanding of the lesson topic.	Answer instructor's questions.
B. Execute learning objective 1.25.1. Practice teaching lessons begin ___________.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
VI. ASSIGNMENT		
A. Comply with Information Sheet 1.25.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.26 GUIDANCE/COUNSELING

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 3.0 Periods
Lab 3.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. NAVEDTRA 110, Procedures For Instructional Systems Development
2. NAVEDTRA 10057B, Human Behavior and Leadership
3. AF Manual 50-62, Principles and Techniques of Instruction, Ch. 3
4. Rogers, Carl, Counseling and Psychotherapy, Ch. 5-9
5. Waters, Jane, Techniques of Counseling, Ch. 17

Instructional Aids:

Role Playing Cards:

1. 1.26.1CS Counseling Situation Card Set

Text:

1. Student Guide pp. 1.26.1.1-1.26.1.11

TERMINAL OBJECTIVE:

4.0 Given recommended procedures for conducting a counseling session, and sample case situations, the student instructor will PARTICIPATE in a counseling session by either being a member of the role-playing group or by observing and critiquing the counseling techniques. The counseling session and evaluation must conform to requirements as outlined in course instruction sheet 1.26.1I.

ENABLING OBJECTIVES:

1.26.1 SELECT, from a list, the definition and purpose of counseling, 100% accuracy is required.

1.26.2 LIST the three types of student problems with 100% accuracy.

1.26.3 SELECT, from a list, the four guidelines for student problem identification. 100% accuracy is required.

1.26.4 MATCH the three approaches to counseling with a correct definition/application/characteristic. 100% accuracy is required.

1.26.1

ENABLING OBJECTIVE - Continued

1.26.5 SELECT, from a list, the five factors to consider in selecting the proper counseling approach. 100% accuracy is required.

1.26.6 Given a scrambled list of procedures for conducting a counseling session, SEQUENCE the procedures in proper order of performance. All counseling procedures must be sequenced correctly as outlined in course instruction sheet 1.26.1I.

1.26.7 WRITE the purpose of the Academic Board with 100% accuracy.

1.26.8 SELECT, from a list, the minimum participants of an Academic Board with 100% accuracy.

1.26.9 SELECT, from a list, the three duties of the Academic Board with 100% accuracy.

CRITERION TEST: Progress Test A-012-0011T6

HOMEWORK: Read Information Sheet 1.26.1I in the Student Guide.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact		
1. If first meeting with the class then introduce yourself.		
2. Give any background on yourself that might be of interest.		
3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives	Turn to cover page of LTG and read objectives.	
1. State and display the TO and EO's for the lesson topic.		
2. May be placed on chalkboard/ VAP, student handouts or contained in the student guide.		
C. Establish Readiness		
1. Motivating statements		
a. Develop interest in lesson topic.		
b. How will the student use the lesson material?		
c. Why does the student need to know the lesson material?		
d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson overview	State and Display on Chalkboard/VAP	
a. Lesson Topic: Guidance/Counseling		
b. Major Teaching Points:		
(1) Definition and Purpose of Counseling		
(2) Types of Student Problems		
(3) Guidelines for Student Problem Identification		
(4) Approaches to Counseling		
(5) Selecting the Proper Approach		
(6) Procedures for Conducting a Counseling Session		
(7) Purpose of Academic Boards		
(8) Minimum Participants of Academic Boards		
(9) Duties of an Academic Board.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
II. PRESENTATION		
A. Definition and purpose of counseling.		
1. A process in which one individual (counselor) assists another (counselee) in solving a problem with which he/she has been confronted.		
2. Purpose - Assist students in solving their problem(s) so that they are able to complete training.		
B. Types of Student Problems		
1. Personal	Have class provide additional personal problems that students may encounter.	
a. Problems at home		
b. Money problems		
c. Worried about upcoming orders		
d. etc.		
2. Attitude		
a. Conditions surrounding the student	Discuss with class	
(1) Social contacts		
(a) Peer pressure		
(b) Involved with the wrong crowd.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(2) Mental feelings	Numerous others could be listed. Discuss with class	
(a) Doesn't like the subject matter		
(b) Doesn't like the school		
(c) Doesn't like his/her instructor		
b. Conditions surrounding the subject	Discuss with class	
(1) Unpleasant conditions - (working in a fireroom)		
c. Natural ability of the student	Discuss with class	
(1) Student may not be mechanically or academically inclined.		
3. Academic	Discuss with class	
a. Student not performing in a satisfactory manner.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
(1) Cannot meet performance standards due to inadequate background or lack of effort.		
C. Guidelines for student problem identification		
1. Instructor believes the student requires assistance as indicated by a significant change in student's behavior.	Discuss with class	
a. Student is inattentive in class.		
b. Student is consistently late for class.		
c. Student cannot meet performance standards.		
d. Student repeatedly fails to prepare assignments.		
e. Student performs below expectations.		
(1) ASVAB scores indicate much higher performance than he/she is demonstrating.		
f. Student performance has dropped rapidly.		
g. Student is disruptive in class.		
2. Students asks for instructor's assistance	Discuss with class	

UTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

a. May be in any area.

b. The instructor must ensure that he remains within his limitations of assisting the student.

c. The instructor may refer the student elsewhere

(1) Instructor should know the location of all the places to which he may refer the student for assistance.

(2) Chaplain, Navy Relief, Legal, ARC, Medical, Drug Rehabilation, etc.

3. Referred by someone else

Discuss with class

a. A fellow classmate observes problem and notifies the instructor.

b. A student asks a classmate for help who then notifies the instructor.

4. Student may suddenly become a discipline case

Discuss with class

a. Many good students have received disciplinary action because of:

(1) Drunk and disorderly, perhaps in the club

(2) Unauthorized absence

(3) Picked up for use controlled substances.

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

D. Approaches to counseling

1. Non-directive (Student-Centered) Discuss with class

a. Counselor plays a secondary role.

b. Emphasis is placed on having the student think through, talk through and explain his/her difficulty so that the student will fully understand, and offer a solution to the problem.

c. Elements of a non-directive counseling session.

(1) Listen to the student in a friendly, but analytical manner.

(2) Do not make a show of authority.

(3) Do not give any unsolicited advice.

(4) Do not argue with the student.

(5) Talk or ask questions under these conditions:

(a) To help the student talk.

(b) To relieve any fear of the student.

(c) To thank the student for reporting his/her feelings.

(d) To keep the student on the subject.

(e) To clarify any misunderstandings.

(f) To encourage the student to explore additional information and alternate solutions.

d. Time consuming.

e. Effective in solving the immediate problem.

f. Extremely effective in obtaining the desired long range results.

(1) By helping the student become more mature.

(2) Using his/her own thoughts and ideas to solve one problem encourages the student to utilize these same resources in solving a wide range of problems that may arise in the future.

2. Directive (Counselor-Centered)

a. Counselor plays the dominant role:

b. Major emphasis is placed on giving information and making the decision for the student.

c. Uses

(1) When the student does not respond to non-directive or combination counseling.

(2) When controlling factors are definite (Navy rules and regulations, command policies, school instructions, etc.)

d. May solve immediate problem.

e. Does not tend to initiate meaningful change in the student on a long term basis.

3. Combination
    a. Counselor and student work as a team to identify and to solve the student's problem.
    b. Contains elements of a directive and non-directive counseling session.
    c. Assists the student in solving his/her immediate problem.
    d. Student will develop self-confidence and be able to solve similar problems in the future without the assistance of the counselor.
    e. Permits flexibility in dealing with a wide variety of student problems.

E. Factors to consider in selection of proper approach
1. Type of problem - personal, academic or attitude
2. Time available - break, after class, etc.
3. Student personality - introvert, extrovert, gregarious, solitary, persistent, vacillation, etc.
4. Student emotional stability -
    a. Broad emotions - get emotional about a wide variety things.
    b. Narrow emotions - get emotional in relatively few situations.
5. Past experiences with the individual.

F. Procedures for conducting a counseling session

1. Preparing for the session

a. Assemble and familiarize yourself with all available data.

(1) If possible and appropriate, memorize significant information so that there is little need to refer back to notes and records during the counseling session.

(2) The excessive use of records and note-taking can have an inhibiting effect on the student.

b. Formulate a temporary plan of action to identify student problem.

c. Provide a setting that is quiet, private, comfortable, adequately lighted and well ventilated.

2. Starting the counseling session

a. Put the student at ease.

(1) Offer coffee or soft drink.

(2) Allow student to smoke, if permissible.

b. Explain your role as a counselor.

(1) Insure student realizes legal limits of the instructors counseling responsibilities.

(a) IAW Navy Regulations-Persons in the Department of the Navy shall report to proper authority offenses committed by persons in the Department of the Navy which come under their observation.

(b) Only chaplains and lawyers have confidentiality privilege.

c. Establish rapport with student.

(1) Builds student confidence.

(2) Gives student a sense of well being.

(3) Show sincere interest in student as a person.

(4) Discuss topics of common interest - student's achievements, strengths, hobbies, current events, sports, etc.

(5) Student will not reveal his/her true feelings or opinions until rapport has been established.

(6) Time spent establishing and maintaining rapport at the start of the session will save time in the long run.

d. Do not express your own opinions or attitudes. To do so might influence the student to say what he believes the counselor wants to hear, rather than what he himself thinks. Could obscure the problem(s).

3. Conducting the counseling session

a. Utilize proper techniques for selected approach.

(1) Shift from one approach to another as the situation dictates.

b. Be yourself, don't put on an act.

c. Speak in simple language.

d. Ask only one question at a time.

(1) A good way to begin is to ask questions that require a simple yes or no answer. Then expand around their response.

(2) Student has a chance to talk freely and to participate actively.

(3) Student feels that he/she is helping himself/herself.

e. Give the student enough time to think about the question.

f. Do NOT interrupt the student unless absolutely necessary.

g. Watch for and probe evasive answers.

(1) Evasive areas may indicates problem area.

h. Search for the accurate or correct answer.

(1) Answers give counselor insight into student's personality, attitude and problem.

(2) Responses also provide cues to possible ways of leading the student to his/her own selection of corrective action.

i. Realize your limitations.

(1) Refer to appropriate person or agency if counselor is unable to assist the student.

(a) Identify real problem.

(b) Decide if assistance can be provided.

(c) Know what agencies are available and what services are offered by these agencies.

j. Requirements of the counselor.

(1) Counselor must demonstrate positive attitude towards the student.

(2) Counselor must inspire the student to accept him as a desirable individual, as a person worthy of authority, and as a leader in his profession.

(3) Possess a sincere desire to help the student.

(4) Understand human nature.

(5) Listen patiently to the student's confidences and be aware of your prejudices.

(6) Be able to communicate advice, ideas and suggestions to the student.

(7) Do NOT stereotype the student. No two students react the same way to a problem.

(8) Collect all required information.

  (a) Used to provide background information.

  (b) Do NOT work only from this external data or from an external framework.

(9) Counselor seeks to enter and to experience the private and subjective world of the student.

(10) Empathy is the key which unlocks the counselor's understanding of the student and the student's understanding of himself.

(11) Do NOT betray student confidence by discussing the student problems with individuals that do not have a need to know.

(12) Do NOT use the counseling session as a spring board/platform for your own selfish or personal causes.

OUTLINE OF INSTRUCTION INSTRUCTOR ACTIVITY STUDENT ACTIVITY

4. Developing a plan of action
    a. Assist student in developing his own plan of action whenever possible.
        (1) Consider alternate plans but ensure one is selected and the student is committed to pursue that course of action.
    b. Determine if further counseling is required.
    c. Determine if referral to another person or agency is necessary.
    d. Keep in mind counseling develops around two controlling factors.
        (1) What is good for the organization
        (2) What is good for the student
5. Closing the counseling session
    a. Instill a feeling of accomplishment in the student (whenever possible).
        (1) Be sure to get a commitment from the student of a course of action to solve his/her problem.
    b. Give the student credit for his/her contributions.
    c. Close the session smoothly and tactfully, and on a positive note.
6. Conducting follow-up activities
    a. Arrange for appointments if necessary.

   - b. Conduct additional research for future counseling (if required).
   - c. Check results of counseling session.

G. Purpose of the Academic Board

1. To make recommendations concerning student progress.
2. NOT to be used for disciplinary purposes.

H. Minimum Participants of the Academic Board

1. Chairperson.
2. Three additional members.
3. Chairperson shall appoint one member of the board to serve as recorder.
   - a. A non-voting member.
4. Each department/school must develop a list of those individuals who are qualified to serve as chairperson and/or academic board members.

I. Duties of the Academic Board

1. Recommend to the training officer or higher authority a course of action when a student is qualified to accelerate his/her training.
2. Recommend to the training officer or higher authority a course of action when a student has failed to achieve the learning objectives.
   - a. Extension of training time in a group paced course.
   - b. Probationary continuance.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. Continuance of training without probation.		
d. Elimination from training and recommendation for disposition.		
(1) Lack of motivation drops cannot be reassigned or reclassified for further training.		
(2) Hardship cases may be reassigned to training in another area.		
(3) Academic drops may be reassigned to training in another area.		
3. Maintain adequate records of the academic board's recommendations.		
a. Records of students dropped from training MUST be maintained for NOT less than one year.		
b. Student entry, graduation, setback and attrition will be recorded in NITRAS (Navy Integrated Training Resources and Administration System).		
III Summary		
A. State the learning objectives	Turn to cover page and read objectives.	Turn to list of learning objectives in Student Guide and follow instructor.
B. Review Major Teaching Points	Summarize the teaching points.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
1. Definition and purpose of counseling		
2. Types of student problems		
3. Guidelines for student problem identification		
4. Approaches to counseling		
5. Selecting the proper approach		
6. Procedures for conducting a counseling session		
7. Purpose of Academic Boards		
8. Minimum participants of an Academic Board		
9. Duties of an Academic Board		
IV. APPLICATION		
A. The student will participate in a role-playing counseling session.		
V. EVALUATION		
A. Check for understanding.	Ask class questions on the major teaching points.	
B. Progress check A-012-0011T5 will be administered _____________.		Study for progress check.
VI ASSIGNMENT:		
Read Information Sheet 1.26.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE A-012-0011

LESSON TOPIC: 1.27 LESSON #4 REQUIREMENTS 30-MINUTE (SKILL OR SKILL AND KNOWLEDGE COMBINATION)

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 1.0 Periods
Lab 16.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. Instructor Training Course A-012-0011 Staff

Instructional Aids:

None

Text:

1. Student Guide pp. 1.27.1.1-1.27.13

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons.

TERMINAL OBJECTIVE:

Lesson will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.27.1 In a classroom exercise, INSTRUCT a thirty-minute practice teaching lesson using the following:

a. Indoctrination in the specific requirements for a thirty-minute lesson.

b. Demonstration Performance or a combination of Demonstration Performance and Illustrated Lecture.

c. Self-developed learning objectives (subject matter may be assigned by staff instructor).

d. Self-developed and annotated lesson topic guide.

e. Appropriate media.

ENABLING OBJECTIVE: (Cont'd)

f. Appropriate instructional techniques.

g. Appropriate reference materials.

h. Criterion test/job sheet as appropriate.

The lesson presentation will be judged SAT/UNSAT by a staff instructor in accordance with criteria provided in course instruction sheet 1.27.1I.

CRITERION TEST: Execute Enabling Objective 1.27.1.

HOMEWORK: Prepare the necessary materials to instruct a practice teaching lesson as outlined in information sheet 1.27.1I.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I INTRODUCTION		
A. Establish Contact		
1. If first meeting with the class then introduce yourself.		
2. Give any background on yourself that might be of interest.		
3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives	Turn to cover page of LTG and read objectives	
1. State and display the TO and EO's for the lesson topic.		
2. May be placed on chalkboard/ VAP, student handouts or contained in the student guide.		
C. Establish Readiness		
1. Motivating statements		
a. Develop interest in lesson topic		
b. How will the student use the lesson material?		
c. Why does the student need to know the lesson material?		
d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson Overview	State and Display on chalkboard/VAP	
a. Lesson Topic; LESSON #4 REQUIREMENTS 30-MINUTE (CHOICE)		
b. Major Teaching Points: (1) Specific Requirements (2) Guidelines (3) Instructional Materials Development Checklist		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
II. PRESENTATION		
A. Select a topic		
1. Do not select a topic on sex, religion, politics or anything that could be dangerous to the human element. When in doubt obtain staff instructor approval first.	Have students refer to information sheet 1.27.1I	
a. A skill or skill and knowledge combination may be taught.		
b. A staff instructor may make an assignment for the lesson type depending on student past performance.		
c. A staff instructor may also assign a different method (i.e. Guided Discussion)		

OUTLINE OF INSTRUCTION   INSTRUCTOR ACTIVITY   STUDENT ACTIVITY

to those student instructors that have mastered the Illustrated Lecture and Demonstration Performance Methods.

2. Write a terminal objective
   a. There is no requirement for the terminal objective to be met.
   b. Use Information Sheet 1.5.1I.
3. Write a minimum of one enabling objective that supports the terminal objective
   a. Approximately 10-13 minutes of teaching material is required.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY

b. The enabling objective must be satisfied by the lesson topic.

c. Information Sheet 1.5.1I applies

4. Perform an objective analysis for each enabling objective.

a. Information sheets 1.8.1I and 1.23.1I apply depending on choice of lesson topic.

b. Refer to Information Sheet 1.23.1I, page #3 for Combination Objective Analysis Format.

5. Develop criterion test items to measure learning achieved for each knowledge enabling objective, refer to 1.22.1I.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Only required for knowledge part of a knowledge/skill combination.		
b. Criterion test will not be administered as part of the lesson presentation.		
6. Develop a lesson topic guide (two copies)		
a. Information Sheet 1.9.1I applies		
b. Cover page for combination lesson		
(1) Provide for all entries except for homework which will be "NONE"		

OUTLINE OF INSTRUCTION **INSTRUCTOR ACTIVITY** **STUDENT ACTIVITY**

(2) Criterion test will be progress test A-012-0011T3 and performance test A-012-0011T4.

7. Develop a job sheet
   a. Required with all skill and skill combination lessons.
   b. Information Sheets 1.21.1I/ 1.24.1I apply
   c. List on cover page
8. Develop or procure any necessary training aids for use in developing the lesson topic as it progresses.
   a. List on cover page
9. Annotate the lesson topic guide
   a. Information Sheet 1.10.1I applies

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
10. Method of Instruction		
a. Demonstration Performance		
b. Combination of Demonstration		
c. Performance and Illustrated Lecture.		
d. As assigned by a staff instructor.		
11. Instruct a 30-Minute practice teaching lesson		
B. Guidelines		
1. Refer to information sheets 1.22.1I or 1.25.1I as appropriate depending on selection of lesson type.	Additional guidelines for combination lesson below.	
2. If you choose a knowledge/skill combination ensure you teach the knowledge prior to the skill.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
a. Use the Illustrated Lecture Method for the knowledge. b. Use the Demonstration Performance Method for the skill. 3. Evaluation for Combination Lesson a. Check for understanding (1) Ask five thought-provoking questions of the class to check for understanding of the lesson topic. List questions and answers in OUTLINE OF INSTRUCTION column. (2) If students are unable to answer the question, reteach as necessary.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Complete: Progress check A-012-0011T3 and Performance Test A-012-0011T4		
C. Instructional Materials Development Checklist 1. Prior to your practice teaching lesson date you are required to have the following items checked and approved by a staff instructor. a. Topic b. Terminal Objective c. Enabling Objective(s) d. Objective Analysis e. Criterion Test Items (if applicable)	Refer students to pg 1.27.1.3 in Student Guide.	Turn to pg 1.27.1.3 in Student Guide and follow the instructor.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
f. Job Sheet		
g. Lesson Topic Guide		
h. Annotated Lesson Topic Guide		
i. Other developed lesson materials (if used)		
2. The following items must be provided to the staff instructor just prior to presenting your practice lesson.		
a. Instructional Materials Development Checklist		
b. Copy of lesson topic guide		
c. Copy of job sheet		
d. Copy of other developed lesson materials (if used)		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
III. SUMMARY		
A. State the lesson objective(s)	Turn to cover page and read the lesson objective(s).	
B. Major Teaching Points	Summarize each teaching point.	
1. Specific Requirements		
2. Guidelines		
3. Instructional Materials Development Checklist	REMIND THE STUDENTS THAT PERFECTION IS ACHIEVED THROUGH PRACTICE. CLASSROOMS ARE AVAILABLE FOR STUDENTS TO PRACTICE PRIOR TO THE PRESENTATION OF THEIR LESSON.	
IV. APPLICATION - NONE		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
V. EVALUATION		
A. Check for Understanding	Ask thought-provoking questions to check student understanding of the lesson topic.	Answer instructor's questions.
B. Execute Learning Objective 1.27.1. Practice teaching lessons begin ____________.		
VI. ASSIGNMENT		
A. Comply with Information Sheet 1.27.1I in the Student Guide.		

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: INSTRUCTOR TRAINING COURSE
A-012-0011

LESSON TOPIC: 1.28 COURSE CRITIQUE/
GRADUATION

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 4.0 Periods
Lab 0.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

None

Instructional Aids:

Training Equipment

1. Video Monitor
2. Video Player

Video Tape

1. 1.28.1VT "Why It? Part II".

TERMINAL OBJECTIVE:

None

ENABLING OBJECTIVE:

None

CRITERION TEST: None

HOMEWORK: None

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact		
1. If first meeting with the class then introduce yourself.		
2. Give any background on yourself that might be of interest.		
3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives	Turn to cover page of LTG and read objectives	
1. State and display the TO and EO's for the lesson topic.		
2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.		
C. Establish Readiness		
1. Motivating statements		
a. Develop interest in lesson topic		
b. How will the student use the lesson material?		
c. Why does the student need to know the lesson material?		
d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson overview a. Lesson Topic; COURSE CRITIQUE/ GRADUATION	State and Display on Chalkboard/VAP	
b. Major Teaching Points: (1) Course Critique (2) Graduation		

UTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. PRESENTATION		
A. Course Critique		
1. Student Comment Sheets	Have each student complete a comment sheet.	Complete a student comment sheet and return to staff instructor
2. You still have a lot to learn	Show 1.28.1VT Why It? Part II	
a. Emphasize to the class that there is a lot more involved and required of an individual as he/she assumes their new instructor billet. Just being a graduate of IT school will not suffice.	Discuss Video Tape	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVIT
b. Treat every day as a new learning experience.		
c. Instructor duty is what you make of it.		
d. Feel free to contact school for help or to route back to school based on job experience.		
B. Graduation		
1. Remind the students to be personally responsible to ensure a service jacket entry is made reflecting their new secondary NEC.		
2. Remind those students that are driving to their new duty assignment to drive carefully and arrive alive.	Present each student a course certificate	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
3. Present each student a graduation certificate.		

III. SUMMARY - None

IV. APPLICATION - None

V. EVALUATION - None

VI ASSIGNMENT - None

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FOR OFFICIAL USE ONLY

INSTRUCTOR BASIC COURSE

STUDENT GUIDE

A-012-0011

Prepared by

NAVAL AIR TECHNICAL TRAINING CENTER
NAVAL AIR STATION MEMPHIS
MILLINGTON, TENNESSEE

Prepared for

NAVAL TECHNICAL TRAINING COMMAND

CNTT-M1365

Foreword

The United States Navy is a vast organization deployed on a global basis, operating under the constant challenge of a crucial mission. The success with which we accomplished this mission depends to a large extent upon the effective discharge of our responsibilities as instructors. Obviously then, the Navy instructor is an important individual. If he is technically competent and an effective instructor, he can multiply his own skill by tens, hundreds, or even thousands through his students.

To be an effective instructor, the Navy man must have a strong sense of purpose - goals toward which he moves - always conscious of his privilege and responsibility to preserve and strengthen the United States, its Constitution, and ideals. Valid goals for Navy instructors include: recognizing the uniqueness of every student and striving to help him reach his highest potential; dealing impartially with all students; striving to increase in knowledge and skills to become a better instructor; contributing and supporting the training program; and serving as a leader and positive model for one's students to emulate.

The Instructor Basic Course is designed to assist your achievement of these goals. The course will give you confidence in your ability to instruct a large class, or to deal with students on an individual basis. Graduating from the Instructor Basic Course, however, will not make you a great instructor. Your success as an instructor will depend on your personal commitment to improve and to build on the foundation of instructional skills you will receive in Instructor Training, and to enhance the personal growth and development of your students.

How To Use This Student Guide

This Student Guide is designed for you to use while you are taking the Instructor Basic Course, and to be kept by you when you graduate from the course. You should write in it, make notes in it, or use it in any way to assist you in learning the subject matter.

Read the orientation material as soon as possible.

Information sheets are provided for most lessons taught during the course. Study these before the classroom presentation.

A class master schedule and a list of all learning objectives taught in the course are provided to assist you.

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INSTRUCTOR TRAINING EVALUATION GUIDELINES

The Instructor Basic Course grading policy is "sat/unsat', based upon the students' performance on the practice teaching lessons. The four practice teaching lessons, with the last being the critical one, are designed to allow the student to show whether he/she has "what it takes" to become an instructor. The practice teaching lessons will be evaluated by staff personnel. The classroom instructors will judge lesson format, teaching methods and techniques with all the objectivity possible. Although there are established guidelines which are used in evaluation, it is impossible to remove all subjectivity from the evaluation process. For that reason, any student receiving a grade of "unsat" on his/her final practice teaching lesson will be given a second chance with a different evaluator.

The student will receive several progress checks during the course. These progress checks will measure the attainment of the course enabling objectives. They will be self-graded, and will not be a factor, in the final grade. Rather, the progress checks are to help the student and then instructor diagnose weaknesses and prescribe corrective actions.

The desire to become an effective instructor coupled with the teaching tools privided during this course will allow each individual to achieve the excellence required of a military instructor. So take the classroom instructor's comments in the spirit offered...the spirit of assistance. The staff instructors hope everyone enjoys the course to the fullest extent possible. GOOD LUCK!

WHAT IS A LEADER?

A leader is one who changes the lives of others by his influence. Great leadership is more than giving orders and seeing that they are obeyed. That type of leader is just a boss. He has no effect after his direct control has ended. The true leader exerts a powerful influence in others long after personal contact has ended - perhaps even long after his death. He has this long-lasting influence because he has changed the way others think, feel, and behave. In other words, he has been a teacher.

In the fighting service, virtually all Officers and Petty Officers eventually undertake formal teaching. In Instructor Training, you have the opportunity to learn methods and techniques which are essential to success in teaching. But there is far more to being a leader/instructor than a polished presentation and getting the facts out to the students. The leader/instructor teaches also by his manners and example, by his habits and outlook, and by his professional attitude and excellence. His students learn to give their best and take pride in a job-well-done, not just in the classroom, but later, on the job. To achieve these results, the leader/instructor must remember that he teaches more by the example he sets, than by the words he says, for he is the model, for better or worse, that his students will watch and imitate forever.

CONTROL NERVOUSNESS

Nervousness is normal, and even the most seasoned speakers and instructors experience it. It is nature's way of preparing you to meet a challenge. Faced with a challenge, your body prepares to meet it; your adrenalin flows, your heartbeat increases, and your respiration changes. If the challenge involves physical activity, this extra energy created would be burned off, and the body would return to normal after the challenge had been met. Since physical activity is not ordinarily involved in a training session, the adrenalin has nothing to do, so it becomes "Butterflies" in your stomach. This is actually a sign that you are ready to meet the challenge.

Experience doesn't eliminate the "Butterflies". In fact, many individuals have found that when they do not have this uneasy feeling, they do not do as well. However, experience will help you control this nervousness and use it to your advantage. But how do you control it?

First of all, be thoroughly prepared. If you're confident that you know your subject, and how to present it effectively, you will have more confidence. Know your opening remarks very well - the first few minutes are the test. Once you have successfully passed the test, you settle down and the session goes well.

It is also important to have the proper mental attitude. Keep in mind that the group is there to learn from you, and that they are more interested in the subject than they are in you personally. One reason for nervousness is your understandable concern about the group's acceptance of you and of what you present. If you are thoroughly prepared and have something to present that is solid, you need not be concerned about an adverse reaction.

Be deliberate. Nervousness may cause you to talk faster than normal, so make an effort to talk more slowly at the start. Concentrate on this, and you will soon find that you are speaking normally.

Concentrate on helping the group to relax. They are anxious and apprehensive too. If you tell them a story, for example, you will find that you will forget about your own feelings. You'll relax along with the group. (Be certain, of course, that the story is relevant to the subject and in good taste.)

Remember that the group is listening to you "one at a time." Think in terms of one individual at a time to eliminate your nervousness at facing a group.

Don't Apologize

You should approach each session with a positive attitude. The group is expecting the best from you - it is entitled to no less. Do not do or say anything which will convey that you are unprepared, uninformed, or unable to present the material. Such excuses will only undermine the group's confidence in you and call attention to weaknesses which might otherwise have gone unnoticed.

Be Poised

You must be in control of yourself at all times. You cannot allow yourself to become irritated or upset. You will need to be amenable to change; to be flexible. You should be receptive to constructive criticism and be able to adjust your presentation as necessary.

Be Enthusiastic

You must be enthusiastic about your subject and the program. If you aren't, the group won't be either. If you want to motivate and inspire, you should display enthusiasm. You do this by the interest you take in your role as an instructor. Your care in preparation, your skill in presenting the material and the interest you show will create a contagious enthusiasm among the participants. As Henry Ford said of enthusiasm: "With it there is accomplishment. Without it there are only alibis."

MASTER SCHEDULE
INSTRUCTOR TRAINING COURSE

FIRST WEEK

Topic No.	Type	Period	Topic	Ratio
First Day - Unit 1.0				
Note: Topic No. 1.1 has been omitted because of military specific materials.				
1.2	Lab	5	Student Self-Introductions	12/1
		6		12/1
1.3	Class	7	Effective Communications	24/1
		8		24/1
Second Day				
1.4	Class	9	The Navy Training Program	24/1
		10		24/1
		11		24/1
1.5	Class	12	Learning Objectives	24/1
		13		24/1
		14		24/1
	Lab	15		12/1
		16		12/1
Third Day				
	Lab	17	Progress Check A-012-0011T1	12/1
1.6	Class	18	Theories/Laws of Learning	24/1
		19		24/1
		20		24/1
1.7	Class	21	Lesson #1 Requirements (20-minute Knowledge)	24/1
1.8	Class	22	Learning Objective Analysis (Knowledge)	24/1
		23		24/1
1.5	Lab	24	Learning Objectives	12/1
Fourth Day				
1.9	Class	25	Lesson Topic Guide Elements/Format	24/1
		26		24/1
1.10	Class	27	Lesson Topic Guide Annotation	24/1
1.11	Class	28	The Effective Instructor	24/1
		29		24/1
1.12	Class	30	Student Motivation	24/1
		31		24/1
1.8	Lab	32	Learning Objectives Analysis (Knowledge)	12/1
Fifth Day				
	Lab	33	Progress Check A-012-0011T2	12/1
1.13	Class	34	Oral Questions and Questioning	24/1
		35	Techniques	24/1
		36		24/1
1.14	Class	37	Instructional Media/Chalkboard/Visual Aid Panel	24/1
1.15	Class	38	Methods/Techniques of Instruction	24/1
		39	(Knowledge)	24/1
1.9	Lab	40	Lesson Topic Guide Elements/Format	12/1

MASTER SCHEDULE
INSTRUCTOR TRAINING COURSE

SECOND WEEK

Topic No.	Type	Period	Topic	Ratio
First Day - Unit 1.0				
1.16	Lab	41	Five-Minute Presentations	12/1
		42		12/1
1.17	Class	43	Measuring Instructional Intent	24/1
		44		24/1
		45		24/1
1.18	Class	46	Test Item Construction	24/1
		47		24/1
	Lab	48		12/1
Second Day				
	Lab	49	Progress Check A-012-0011T3	12/1
1.19	Class	50	Student Factors Affecting Learning	24/1
		51		24/1
1.7	Lab	52	Lesson #1 LTG Development	8/1
		53		8/1
		54		8/1
		55		8/1
		56		8/1
Third Day				
	Lab	57	Lesson #1 Practice Teaching	8/1
		58		8/1
		59		8/1
		60		8/1
		61		8/1
		62		8/1
		63		8/1
		64		8/1
Fourth Day				
1.20	Class	65	Evaluation of Instruction	24/1
		66		24/1
		67		24/1
1.21	Class	68	Instructional Media (Training Aids)	24/1
		69		24/1
		70		24/1
		71		24/1
1.22	Class	72	Lesson #2 Requirements (30-minute Knowledge)	24/1
Fifth Day				
	Lab	73	Progress Check A-012-0011T4	12/1
		74	Lesson #2 LTG Development	8/1
		75		8/1
		76		8/1
		77		8/1
		78		8/1
		79		8/1
		80		8/1

MASTER SCHEDULE
INSTRUCTOR TRAINING COURSE

THIRD WEEK

Topic No.	Type	Period	Topic	Ratio
First Day - Unit 1.0				
1.22	Lab	81	Lesson #2 Practice Teaching	8/1
		82		8/1
		83		8/1
		84		8/1
		85		8/1
		86		8/1
		87		8/1
		88		8/1
Second Day				
1.23	Class	89	Learning Objective Analysis (Skill)	24/1
1.24	Class	90	Methods/Techniques of Instruction (Skill)	24/1
		91		24/1
1.25	Class	92	Lesson #3 Requirements (30-min. Skill)	24/1
	Lab	93	Lesson #3 LTG Development	8/1
		94		8/1
		95		8/1
		96		8/1
Third Day				
		97	Lesson #3 LTG Development	8/1
		98		8/1
		99		8/1
		100		8/1
		101		8/1
		102		8/1
		103		8/1
		104		8/1
Fourth Day				
		105	Lesson #3 Practice Teaching	8/1
		106		8/1
		107		8/1
		108		8/1
		109		8/1
		110		8/1
		111		8/1
		112		8/1
Fifth Day				
1.26	Class	113	Guidance/Counseling	24/1
		114		24/1
		115		24/1
	Lab	116	Role Playing	8/1
		117		8/1
1.27	Class	118	Academic Boards	24/1
1.28	Class	119	Lesson #4 Requirements (30-min. Choice)	24/1
	Lab	120	Lesson #4 LTG Development	12/1

MASTER SCHEDULE
INSTRUCTOR TRAINING COURSE

FOURTH WEEK

Topic No.	Type	Period	Topic	Ratio
First Day - Unit 1.0				
	Lab	121	Progress Check A-012-0011T5	12/1
		122	Lesson #4 LTG Development	8/1
		123		8/1
		124		8/1
		125		8/1
		126		8/1
		127		8/1
		128		8/1
Second Day				
	Lab	129	Lesson #4 Practice Teaching	8/1
		130		8/1
		131		8/1
		132		8/1
		133		8/1
		134		8/1
		135		8/1
		136		8/1
Third Day				
1.29	Class	137	Course Critique	24/1
		138		24/1
		139		24/1
	Class	140	Graduation	24/1

SUMMARIZATION OF INSTRUCTOR/STUDENT RATIOS

Classroom..........	24/1	59 periods	49 contact hours
Lab................	12/1	16 periods	13 contact hours
Lab................	8/1	65 periods	54 contact hours
TOTAL..........................		140 periods	116 contact hours

COURSE LEARNING OBJECTIVES

UNIT 1.0 INSTRUCTIONAL PLANNING AND IMPLEMENTATION August 1979

TERMINAL OBJECTIVE:

1.0 Utilizing subject matter and any appropriate reference materials, the student instructor will PLAN and WRITE lesson topic guides for practice teaching lesson requirements. The lesson topic guides must meet the requirements outlined in course instruction sheets 1.9.1I and 1.10.1I and lesson presentation guidelines provided by the Instructor Basic Course.

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

3.0 Utilizing any appropriate reference material, the student instructor will DEVELOP and WRITE a criterion test to measure the achievement of learning objectives presented in practice teaching lessons. The criterion test items must meet the criteria outlined in course instructions sheets 1.17.1I and 1.18.1I.

4.0 Given recommended procedures for conducting a counseling session, and sample case situations, the student instructor will PARTICIPATE in a practice counseling session by either being a member of the role-playing group or by observing and critiquing the counseling techniques. The counseling session and evaluation must conform to requirements as outlined in course instruction sheet 1.26.1I.

5.0 Utilizing the Instructor Evaluation Form CNET-GEN 1540/4 and an evaluation checklist, the student instructor will EVALUATE group-paced practice teaching lessons presented by student instructors. Evaluation procedures will comply with course instruction sheet 1.20.1I.

LESSON TOPIC 1.2 STUDENT SELF-INTRODUCTION

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.2.1 In a classroom situation and permitted use of any appropriate notes, PRESENT a Two-Minute self-introduction that relates personal background information and/or future goals. The presentation will be commented on by a staff instructor as to the following elements:

a. Voice volume

b. Voice clarity

c. Posture

d. Gestures

LESSON TOPIC 1.3 EFFECTIVE COMMUNICATION

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVES:

1.3.1 Given a list of listening barriers and recommended corrective actions, MATCH each of ten barriers to effective listening with a recommended corrective action. 90% accuracy is required.

1.3.2 Given a list of faulty communication patterns and recommended corrective actions, MATCH the faulty communication pattern with a corrective action. 80% accuracy is required.

1.3.3 Given a list of speaker and listener responsibilities, LABEL the speaker responsibilities with an "S" and the listener responsibilities with an "L". 100% accuracy is required.

LESSON TOPIC 1.4 THE NAVY TRAINING PROGRAM

TERMINAL OBJECTIVE:

1.0 Utilizing subject matter and any appropriate reference materials, the student instructor will PLAN and WRITE lesson topic guides for practice teaching lesson requirements. The lesson topic guides must meet the requirements outlined in course instruction sheets 1.9.1I and 1.10.1I and lesson presentation guidelines provided by the Instructor Basic Course.

ENABLING OBJECTIVES:

1.4.1 Given a list of nine descriptive statements, IDENTIFY those which refer to self-paced instruction with an "S", those which refer to group-paced instruction with a "G", and those which refer to both a "B". No more than two errors permitted.

1.4.2 MATCH a list of the major steps of a systems approach to training with a list of statements that describe the purposes/outcomes of those steps. The use of classroom notes is allowed. 80% accuracy is required.

LESSON TOPIC 1.5 LEARNING OBJECTIVES

TERMINAL OBJECTIVE:

1.0 Utilizing subject matter and any appropriate reference materials, the student instructor will plan and write lesson topic guides for practice teaching lesson requirements. The lesson topic guides must meet the requirements outlined in course instruction sheets 1.9.1I and 1.10.1I and lesson presentation guidelines provided by the Instructor Basic Course.

ENABLING OBJECTIVES:

1.5.1 Given a list of definitions, SELECT the definition of a learning objective. 100% accuracy is required.

1.5.2 Without the aid of reference material, LIST three purposes of learning objectives. 100% accuracy is required.

1.5.3 Without the aid of reference material, LIST in descending order the two levels of learning objectives. Levels must match the criteria in NAVEDTRA 106A.

1.5.4 Without the aid of reference material, MATCH the three characteristics of a learning objective with a correct definition/example. 100% accuracy is required.

1.5.5 Given a list of five learning objectives, IDENTIFY the three characteristics by underlining the Behavior, Condition and Standard. 100% accuracy is required.

1.5.6 Without the aid of reference material, MATCH each of the four categories of learning objectives with a correct definition/example. 100% accuracy is required.

1.5.7 Given a list of learning objectives, CLASSIFY each learning objective by category. Classification will be performed by labeling the objective with an approrpiate symbol. All objectives will be correctly classified.

1.5.8 WRITE learning objectives to support practice teaching assignments on a topic of your choice. The learning objectives will be evaluated by a staff instructor and judged SAT/UNSAT in accordance with criteria outlined in course instruction sheet 1.5.1I and the NAVEDTRA 106A.

LESSON TOPIC 1.6 THEORIES/LAWS OF LEARNING

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVES:

1.6.1 With 100% accuracy, WRITE the definition of learning.

1.6.2 With 100% accuracy, MATCH two groups of theories of learning with a correct definition.

1.6.3 MATCH the ways that students learn with a correct definition/application. No more than one error is permitted.

1.6.4 With 100% accuracy, MATCH the Laws of Learning with a correct definition/application.

1.6.5 With 100% accuracy, MATCH three theories of forgetting to a correct definition/application.

LESSON TOPIC 1.7 LESSON #1 REQUIREMENTS (20-MINUTE KNOWLEDGE)

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.7.1 In a classroom exercise, INSTRUCT a Twenty-Minute practice teaching (Knowledge) lesson using the following:

a. Indoctrination in the specific requirements for a Twenty-Minute Knowledge lesson.

b. Illustrated lecture method.

c. Chalkboard/Visual Aid Panel.

d. Self-developed learning objective(s).

e. Self-developed and annotated lesson topic guide.

f. Appropriate reference materials.

g. Appropriate instructional techniques.

The lesson presentation will be judged SAT/UNSAT by a staff instructor in accordance with the guidelines established in course instruction sheet 1.7.1I and will be videotaped so the student instructor can perform a self-critique of his/her own presentation with a staff instructor.

LESSON TOPIC 1.8 LEARNING OBJECTIVE ANALYSIS (KNOWLEDGE)

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.8.1 Utilizing self-developed learning objectives and the objective analysis format for knowledge objectives, WRITE an objective analysis to determine major and minor teaching points for lesson topic guides to support practice teaching knowledge lessons. The objective analysis will be judged SAT/UNSAT in accordance with the criteria outlined in course instruction sheet 1.8.1I.

LESSON TOPIC 1.9 LESSON TOPIC GUIDE ELEMENTS/FORMAT

TERMINAL OBJECTIVE:

1.0 Utilizing subject matter and any appropriate reference materials, the student instructor will PLAN and WRITE lesson topic guides for practice teaching lesson requirements. The lesson topic guides must meet the requirements outlined in course instruction sheets 1.9.1I and 1.10.1I and lesson presentation guidelines provided by the Instructor Basic Course.

ENABLING OBJECTIVES:

1.9.1 From a given list, SELECT the definition of a lesson topic guide as defined in CNETINST 1500.12. 100% accuracy is required.

1.9.2 From a given list, SELECT the definition of an instructor guide as defined in CNETINST 1500.12. 100% accuracy is required.

1.9.3 Without the use of reference materials, LIST two purposes for using a lesson topic guide. 100% accuracy is required.

1.9.4 Utilizing self-developed learning objectives, an objective analysis, subject matter reference material and a lesson topic guide format, DEVELOP and WRITE lesson topic guides to support practice teaching assignments. The lesson topic guides must meet the criteria outlined in course instruction sheets 1.9.1I and 1.10.1I.

LESSON TOPIC 1.10 LESSON TOPIC GUIDE ANNOTATION

1.0 Utilizing subject matter and any appropriate reference materials, the student instructor will PLAN and WRITE lesson topic guides for practice teaching lesson requirements. The lesson topic guides must meet the requirements outlined in course instruction sheets 1.10.1I and 1.15.1I and lesson presentation guidelines provided by the Instructor Basic Course.

ENABLING OBJECTIVE:

1.10.1 Using personal notes and a course instruction sheet, ANNOTATE four lesson topic guides in preparation for teaching the subject matter content of each lesson topic guide. The annotation must enhance the learning process and comply with the guidelines in course instruction sheet 1.10.1I.

LESSON TOPIC 1.11 THE EFFECTIVE INSTRUCTOR

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.11.1 While instructing practice teaching lessons, DISPLAY the professional precepts of a classroom instructor by establishing and maintaining an effective learning environment. The student's application of the following precepts will be commented on by a staff instructor using the Observation Checklist for Instructor Trainee and will have a major bearing on the overall evaluation being SAT or UNSAT.

a. The Instructor's Role in the Training System

b. The Responsibilities/Characteristics of the Instructor

c. The Influence of the Instructor Attitude on Learning

d. Effective Communications Techniques

LESSON TOPIC 1.12 STUDENT MOTIVATION

TERMINAL OBEJCTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.12.1 While instructing in a classroom environment, MOTIVATE students to attain learning objectives. Motivation principles should be applied throughout the lesson. Motivation techniques will include those recommended in course instruction sheet 1.9.1I and will be judged SAT/UNSAT by a staff instructor in accordance with lesson requirements for each practice teaching lesson.

1.12.2 Given a list of statements, SELECT the definition of motivation. 100% accuracy is required.

1.12.3 Given two lists, one containing categories of motivation and one definitions/examples, MATCH the categories of motivation with their required correct definition/example. 100% accuracy is required.

1.12.4 Given two lists, one containing types of motivation and one definitions/examples, MATCH the type of motivation with a correct definition/example. 100% accuracy is required.

1.12.5 Given a list containing principles/des[illegible]ive statements, MATCH the five principles of motivati[illegible]h a correct descriptive statement. No more than one error is permitted.

1.12.6 Given a list of true/false statements on student motivation, IDENTIFY those ideas that will contribute to motivation by labeling each true statement with a "T". 100% accuracy is required.

LESSON TOPIC 1.13 ORAL QUESTIONS AND QUESTIONING TECHNIQUES

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.13.1 With 100% accuracy SELECT, from a list, the purposes of oral questions.

1.13.2 With 100% accuracy SELECT, from a list, the characteristics of a good oral question.

1.13.3 With 100% accuracy MATCH the following types of oral questions with the correct definition/purpose/example.

a. Overhead
b. Yes-No
c. Reverse
d. Redirected
e. Multiple Answer
f. Direct

1.13.4 With 100% accuracy MATCH the following questioning techniques with the correct definition/example/application.

a. Five-Step Questioning Technique
b. Handling Incorrect Responses
c. Calling on Non-Volunteers
d. Prompting
e. Seeking Further Clarification
f. Refocusing
g. Techniques the Instructor Should NOT Use

1.13.5 DEMONSTRATE the use of appropriate questions and questioning techniques while instructing practice teaching lessons. Oral questions and questioning techniques will be judged SAT/UNSAT by a staff instructor in accordance with guidelines outlined in course instruction sheet 1.13.1I.

LESSON TOPIC 1.14 INSTRUCTIONAL MEDIA (CHALKBOARD/VISUAL AID PANEL)

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.14.1 DEMONSTRATE effective chalkboard/visual aid panel technique during practice teaching lessons. Criteria for satisfactory techniques will include the following elements as outlined in course instruction sheet 1.14.1I.

a. Preparation
b. Planned layout
c. Neatness
d. Legibility
e. Reenforcement of learning
f. Appropriateness to lesson topic

LESSON TOPIC 1.15 METHODS/TECHNIQUES OF INSTRUCTION (KNOWLEDGE)

[illegible]MINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.15.1 MATCH each method of teaching to its correct definition/example. No more than one error is permitted.

1.15.2 DEMONSTRATE the delivery techniques for the illustrated lecture method of teaching during practice teaching lessons. Delivery techniques will be judged SAT/UNSAT by a staff instructor in accordance with course instruction sheet outline requirements for each practice teaching lesson.

LESSON TOPIC 1.16 FIVE-MINUTE PRESENTATIONS

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.16.1 Utilizing any appropriate subject matter approved by a staff instructor, PRESENT a Five-Minute lesson introduction specifically designed to arouse interest in a topic. Satisfactory performance will be accomplished by establishing contact, utilizing the Laws of Readiness and Effect, and by stating the topic in accordance with guidelines established in course instruction sheet 1.16.1I.

LESSON TOPIC 1.17 MEASURING INSTRUCTION INTENT

TERMINAL OBJECTIVE:

3.0 Utilizing any appropriate reference material, the student instructor will DEVELOP and WRITE criterion test items to measure the achievement of learning objectives as presented in practice teaching lessons. The criterion test items must meet the criteria outlined in course instructions sheets 1.17.1I and 1.18.1I.

ENABLING OBJECTIVE:

1.17.1 From a given list, SELECT the purposes of testing as defined in course instruction sheet 1.17.1I.

1.19.2 MATCH the common characteristics of students with a correct definition/example/application. No more than one error is permitted.

1.19.3 From a given list, MATCH the areas of individual differences among students to a correct definition/example/application. No more than two errors are permitted.

1.19.4 MATCH the effects of individual differences in a classroom to a correct example/procedure/application to be followed in handling problem situations. 100% accuracy is required.

1.19.5 LIST the two causes of individual differences with 100% accuracy.

1.19.6 LIST, from memory, a minimum of five general rules to follow when instructing foreign students.

LESSON TOPIC 1.20 EVALUATION OF INSTRUCTION

TERMINAL OBJECTIVE:

5.0 Utilizing the Instructor Evaluation Form CNET-GEN 1540/4 and an evaluation checklist, the student instructor will EVALUATE group-paced practice teaching lessons presented by student instructors. Evaluation procedures will comply with course instruction sheet 1.20.1I.

ENABLING OBJECTIVE:

1.20.1 LIST two purposes for evaluating instruction. 100% accuracy is required.

1.20.2 LIST six main areas to observe while evaluating instruction. Five areas must be correctly listed.

1.20.3 EVALUATE a classroom exercise practice teaching lesson presented by a fellow classmate. The evaluator will use Instructor Evaluation Form CNET-GEN 1540/4 and course instruction sheet 1.20.1I. Evaluation procedures will comply with criteria outlined in the course instruction sheet.

1.20.4 Using an Instructor Self-Evaluation Record, CONDUCT an instructor self-evaluation. Performance will be judged in accordance with guidelines provided with the Instructor Self-Evaluation Record.

1.17.2 Provided a list of criterion-referenced terminology and norm-referenced terminology, LABEL the criterion-referenced terms with a "CT" and the norm-referenced terms with a "NR". If the term is associated equally well with both measurement systems LABEL as "BOTH". All terms must be labeled without error.

1.17.3 Given a list of the types of test and associated definitions/purposes, MATCH each type of test with a correct definition/purpose. Only one error is permitted.

1.17.4 Given a scrambled list of statements, the student will SEQUENCE, in the order of performance, the criterion test development procedures. Sequence must comply with procedures outlined in course instruction sheet 1.17.1I.

LESSON TOPIC 1.18 TEST ITEM CONSTRUCTION

TERMINAL OBJECTIVE:

3.0 Utilizing any appropriate reference material, the student instructor will DEVELOP and WRITE a criterion test to measure the achievement of learning objectives presented in practice teaching lessons. The criterion test items must meet the criteria outlined in course instructions sheets 1.17.1I and 1.18.1I.

ENABLING OBJECTIVE:

1.18.1 Given the use of an instruction sheet that outlines construction hints for writing test items, WRITE test items that measure self-developed learning objectives. The test items will comply with requirements outlined in course instruction sheet 1.18.1I.

LESSON TOPIC 1.19 STUDENT FACTORS AFFECTING LEARNING

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.19.1 LIST six learning senses and CIRCLE the two most important to the majority of learning. 100% accuracy is required.

LESSON TOPIC 1.21 INSTRUCTIONAL MEDIA (TRAINING AIDS)

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVES:

1.21.1 LIST three purposes of training aids from memory. 100% accuracy is required.

1.21.2 Given a list of statements, SELECT the characteristics of an effective training aid. 100% accuracy is required.

1.21.3 Given the two categories of training aids, MATCH each category to a correct definition/example. 100% accuracy is required.

1.21.4 Given the use of an instruction sheet, PREPARE and USE training aids and associated equipment to support practice teaching lessons. Format/use will be judged with criteria outlined in course instruction sheet 1.21.1I.

1.21.6 Given the use of an instruction sheet, DEVELOP appropriate instruction sheets for practice teaching lessons. The instruction sheets will comply with format and criteria outlined in course instruction sheet 1.21.1I.

LESSON TOPIC 1.22 LESSON #2 REQUIREMENTS 30-MINUTE (KNOWLEDGE)

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.22.1 In a classroom exercise, INSTRUCT a Thirty-Minute practice teaching (Knowledge) lesson using the following:

- a. Indoctrination in the specific requirements for a Thirty-Minute knowledge lesson.
- b. Illustrated lecture method.
- c. Chalkboard/Visual Aid Panel supplemented with at least one additional training aid/device (i.e., flock card, transparency, flip chart, model, etc.).
- d. Self-developed learning objective(s).
- e. Self-developed and annotated lesson topic guide.
- f. Appropriate reference materials.
- g. Appropriate instructional techniques.
- h. Criterion test.

The lesson presentation will be judged SAT/UNSAT by a staff instructor in accordance with the guidelines established in course instruction sheet 1.22.1I.

LESSON TOPIC 1.23 LEARNING OBJECTIVE ANALYSIS (SKILL)

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.23.1 Utilizing self-developed learning objectives and the objective analysis format for a skill objective, WRITE an objective analysis to determine major and minor teaching points for a lesson topic guide to support a practice teaching skill lesson. The objective analysis will be judged SAT/UNSAT in accordance with criteria outlined in course instruction sheet 1.23.1I.

LESSON TOPIC 1.24 METHODS/TECHNIQUES OF INSTRUCTION (SKILL)

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

ENABLING OBJECTIVE:

1.24.1 Given a list of skills, LABEL each as either mental or physical skill. 100% accuracy is required.

1.24.2 Given a course instruction sheet, CONSTRUCT a job sheet which will be used in the application of a practice teaching skill lesson. The job sheet format will be judged SAT/UNSAT by a staff instructor in accordance with the criteria outlined in course instruction sheet 1.24.1I.

1.24.3 During a practice teaching lesson, DEMONSTRATE the delivery techniques for the demonstration performance method of teaching a skill. The delivery techniques will be judged SAT/UNSAT by a staff instructor in accordance with instruction sheet 1.24.1I.

LESSON TOPIC 1.25 LESSON #3 REQUIREMENTS 30-MINUTE (SKILL)

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

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ENABLING OBJECTIVE:

1.25.1 In a classroom exercise, INSTRUCT a Thirty-Minute practice teaching (skill) lesson using the following:

a. Indoctrination in the specific requirements for a Thirty-Minute skill lesson.

b. Demonstration Performance Method.

c. Self-developed learning objectives.

d. Self-developed and annotated lesson topic guide.

e. Appropriate self-developed or procured media.

f. Appropriate reference materials.

g. Appropriate instructional techniques.

h. Job Sheet.

The lesson presentation will be judged SAT/UNSAT by a staff instructor in accordance with the guidelines established in course instruction sheet 1.25.1I.

LESSON TOPIC 1.26 GUIDANCE/COUNSELING

TERMINAL OBJECTIVE:

4.0 Given recommended procedures for conducting a counseling session, and sample case situations, the student instructor will PARTICIPATE in a counseling session by either being a member of the role-playing group or by observing and critiquing the counseling techniques. The counseling session and evaluation must conform to requirements as outlined in course instruction sheet 1.26.1I.

ENABLING OBJECTIVES:

1.26.1 SELECT, from a list, the definition and purpose of counseling. 100% accuracy is required.

1.26.2 LIST the three types of student problems with 100% accuracy.

1.26.3 SELECT, from a list, the four guidelines for student problem identification. 100% accuracy is required.

1.26.4 MATCH the three approaches to counseling with a correct definition/application/characteristic. 100% accuracy is required.

1.26.5 SELECT, from a list, the five factors to consider in selecting the proper counseling approach. 100% accuracy is required.

1.26.6 Given a scrambled list of procedures for conducting a counseling session, SEQUENCE the procedures in proper order of performance. All counseling procedures must be sequenced correctly as outlined in course instruction sheet 1.26.1I.

1.26.7 WRITE the purpose of the Academic Board with 100% accuracy.

1.26.8 SELECT, from a list, the minimum participants of an Academic Board with 100% accuracy,

1.26.9 SELECT, from a list, the three duties of the Academic Board with 100% accuracy.

LESSON TOPIC 1.27 LESSON #4 REQUIREMENTS 30-MINUTE SKILL OR SKILL AND KNOWLEDGE COMBINATION 1.0 16.0

TERMINAL OBJECTIVE:

2.0 Utilizing the appropriate instructional methods, media and techniques the student instructor will INSTRUCT group-paced practice teaching lessons. Lessons will be judged SAT/UNSAT by a staff instructor in accordance with procedures and lesson requirements presented in course instruction sheets for each practice teaching lesson.

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ENABLING OBJECTIVE:

1.27.1 In a classroom exercise, INSTRUCT a Thirty-Minute practice teaching lesson using the following:

a. Indoctrination in the specific requirements for a Thirty-Minute lesson.

b. Demonstration performance or a combination of demonstration performance and illustrated lecture.

c. Self-developed learning objectives (subject matter may be assigned by staff instructor).

d. Self-developed and annotated lesson topic guide.

e. Appropriate media.

f. Appropriate instructional techniques.

g. Appropriate reference materials.

h. Criterion test/job sheet as appropriate.

The lesson presentation will be judged SAT/UNSAT by a staff instructor in accordance with criteria provided in course instruction sheet 1.27.1I.

INFORMATION SHEET 1.2.1I August 1979

TITLE: STUDENT SELF-INTRODUCTION

INTRODUCTION:

The purpose of this information sheet is to outline the requirements necessary for satisfactory performance of a student self-introduction.

REFERENCE:

1. Instructor Training Course A-012-0011

INFORMATION:

A. Structuring the Introduction

   1. The introduction will reflect an introduction of yourself to your classmates.

   2. Suggested points to cover:

      a. Name and rate

      b. Personal background

      c. Past duty stations

      d. Education background

      e. Hobbies

      f. Personal goals

   3. The introduction must include a brief statement of what you expect to gain from Instructor Training and your tour of instructor duty.

   4. Preparing the talk

      a. Prepare a set of brief notes

         1) Points you wish to bring out

         2) Dates, numbers, names, etc.

      b. Organize your notes in a logical sequence.

   5. Giving your talk

a. Write your name and rate on the chalkboard/VAP.

b. State your name and rate to class.

c. Give your talk in a natural conversational manner using your notes as a guide only.

   1) Refer to notes as frequently as required but avoid reading the notes to the class.

d. Finish the talk in approximately two-minutes.

6. The following areas will be observed by a staff instructor:

   a. Voice volume

   b. Voice clarity

   c. Posture

   d. Gestures

INFORMATION SHEET 1.3.1I August 1979

TITLE: EFFECTIVE COMMUNICATION

INTRODUCTION:

A survey of middle managers has revealed that 70% of a person's awake time is spent communicating. Of this time spent communicating, 9% is spent writing, 16% is spent reading, 30% is spent speaking and 45% is spent listening.

The average person is asleep for 7 hours and awake for 17 hours. Using the above information, the average person spends 11.9 hours a day communicating. Of this 11.9 hours the average person spends 1.071 hours writing, 1.90 hours reading, 3.57 hours speaking and 5.35 hours listening.

The following information sheet contains listening barriers, ways to overcome these barriers, faulty communication patterns with recommended corrective actions, and speaker and listener responsibilities.

REFERENCES:

1. Haney, W. L. Communication and Organizational Behavior, 3rd Edition, Chapter 16.
2. Nichols, R., Are You Listening?
3. Air Force Manual 50-62, Principles and Techniques of Instruction, 1974, Chapters 6 and 7.
4. NAVEDTRA 007-01-69-76, Volume I, Navy Career Counselor 1 & C, Vol. I, Chapter 3.

INFORMATION:

A. Barriers to effective listening/Corrective Action

1. Barrier - Calling the subject matter uninteresting, due to premature evaluation of the subject matter.

   Corrective Action: Find areas of interest by listening for things that you can put to use.

2. Barrier - Criticizing the delivery; this includes speech delivery and physical appearance of the instructor.

   Corrective Action: Judge content, not the delivery; it's the subject matter that counts.

3. Barrier - Getting over-stimulated, which is caused by snap judgement.

   Corrective Action: Withhold evaluation until comprehension is complete. Do not get excited about a speaker until you are sure that you thoroughly understand what has been spoken.

4. Barrier - Listening for facts and trying to memorize all pertinent information.

   Corrective Action: Listen for ideas, discriminate between facts and principles.

5. Barrier - Outlining everything, being too preoccupied with the plan of organization.

   Corrective Action - Be flexible in note taking by equipping with a few systems of note taking and adjusting to organization pattern of the speaker.

6. Barrier - Faking attention but really daydreaming.

   Corrective Action - Work at listening by concentrating on what is being said.

7. Barrier - Distractions; both internal and external disturbances.

   Corrective Action - Resist distractions; adjust quickly to any kind of abnormal distraction.

8. Barrier - Evading the difficult in technical and highly informative theoretical materials.

   Corrective Action - Exercise the mind in listening to difficult materials by developing an appetite for difficult and challenging materials.

9. Barrier - Submitting to emotional words, e.i., losing the meaning of words and phrases or allowing certain words to be offensive and distracting.

   Corrective Action - Maintain an open mind, identify and analyze the words or phrases most upsetting emotionally.

10. Barrier - Wasting thought power by taking mental liberties.

    Corrective Action - Capitalize on thought-speed by anticipating speaker's next move and by mentally summarizing what the speaker has said.

C. Faulty Communication Patterns with Recommended Corrective Action

A study of human language habit patterns which lead to faulty communication reveals behavior that is common to experiences everyone has had. While recognizing that certain persons intentionally miscommunicate, emphasis here will be on persons who communicate honestly and want to be understood. Each miscommunication pattern will be identified together with causes and corrective techniques for improving expression and comprehension.

BY-PASSING

One language pattern, called BY-PASSING, occurs when the sender (speaker, writer, etc.) and receiver (listener, reader, etc.) miss each other with their meanings. One word or phrase may have different meanings to each of two people (e.g. "burn," "chop," "head," "cool") while on another subject, each may use different words to mean the same thing (e.g. overhead/ceiling, deck/floor). Misunderstandings can be rooted in meaning shifts through the passage of time (e.g. mess, boss, crazy, bad), slang expressions (e.g. up-tight far-out, heavy), regional usages (e.g. dinner/supper, apartment/flat/walk-up) and technical jargon known only to members of a trade or profession.

The direct result of by-passing is that both parties believe they agree or disagree when just the reverse is true. By-passing is caused because a person makes the illogical assumption that words have identical meaning for both parties. The basis for such a misconception is the presumption that words have meanings (they don't, people do) and that each word has only one usage (check a dictionary for commonly used words to verify this as a mistaken notion).

By-passing is less likely if the receiver is person-minded, not word-minded, and realizes who is transmitting the message. Habitually asking questions and paraphrasing the sender's remarks helps to clarify meanings and being sensitive to both verbal and situational contexts will be beneficial. The sender likewise has a responsibility to encourage and require feedback to be certain his transmission is accurately received.

ALLNESS

ALLNESS is the inclination to believe that one knows everything about a subject and can make the definitive or final statement about it. The assumption that it is possible to know all there is to know about a subject is erroneous, and those who believe this insulate themselves from change and closed-mindedly deny other points of view.

Additional characteristics of the allness pattern are the tendency to judge the whole by its parts (frequently the worst parts) and the process of focusing on some details while neglecting others (abstracting). Think about someone you know and list five details about him or her. Can you list anything else? Very likely you know much more but you are going to find it impossible to tell everything there is to say about this friend. A person avoids the destructive allness pattern by developing humility with regard to presumption of authority on any subject, verbally qualifying his remarks with "so far as I know", "etc." and similar terms.

STEREOTYPING

If you think that all union officials are corrupt, then you would not be likely to vote for Mel Allen, President of Local #402, when he runs for a seat on the Board of Education. On the basis of his group membership, you would be disregarding those characteristics which make him unique. Joe Thompson, ex-football star, applied for a job as legal assistant in an attorney's office. If the stereotype of the brawny but brainless athlete was applied to Joe, he would never be selected for the job regardless of his other qualifications. STEREOTYPING is the indiscriminate application of a fixed image of a group to an individual assigned to that group, disregarding individual differences. It is rooted in the human readiness to categorize and classify everything, including people, places and things. Neglect of differences and overemphasis of similarities is caused partly by cultural problems, persons from different regions and backgrounds, and partly by linguistic problems which stem from the large number of mass nouns and verbs in the English language. Stereotyping is overcome by accepting the premise of uniqueness and developing sensitivity to differences through use of the "which" index--asking for clarification of specifically which person, which place or which thing is being discussed.

FROZEN EVALUATION

Failure to acknowledge changes which occur during the passage of time leads directly to a FROZEN EVALUATION. The underlying assumption that once something or someone is labeled, it doesn't change, is not realistic. Judgements made in the present are apt to be inaccurate if based only on past information. An evaluation which was formed in the past may have been accurate, but the passage of time erodes the reliability of the evaluation. Change is the rule in modern society; therefore, frozen evaluations may be of decreasing value as time goes on. The 35-year old veteran who had a record of teenage delinquency has long ago proven himself reliable through responsible service to his country. Corrective heart surgery impossible ten years ago is now a realistic alternative for an ailing patient. Last year's cellar-dwelling football team is not the same as the new squad beefed-up by trades and rookie additions.

POLARIZATION

A linguistic trap into which many speakers fall is thinking and communicating in "either-or" terms. This is called POLARIZATION. There are legitimate situations in which it is appropriate to address contradictories, and that is when one alternative must occur but both cannot. If there are two and only two choices, that is a contradiction. Miscommunication, however, is probable when situations which involve middle ground are mistaken for contradictories. If there is an alternative which is neither "yes" nor "no" but "maybe" or "perhaps", that issue is a contrary. How much money makes you rich or how little is poor? If you are sick, how will you know when you're healthy? How cold is cold; how hot is hot? There are shades of grey between each extreme in a contrary.

The irrational behavior which is polarization can produce self-delusion or others often causing discussions to be escalated into arguments. Both contraries and contradictions can be expressed in similar grammatical structure (either-or) but the most important reason for confusing the two is neglecting to recognize shadings between extremes. We are, in fact, products of our conditioning in a language which has few intermediate terms to express gradation other than inexact adjectives and adverbs. Are there really only two sides to every question? Certainly not; most issues of any importance are multi-sided. Both popular songs and cheap fiction reinforce the absurd notion that every subject can be expressed as a contradictory. Finally, expediency, the ease of or necessity for a snap-decision, can obscure judgement and cause us to misevaluate contraries as contradictories.

Polarization can be overcome by applying the "how much" index. Use numbers when possible, substantive middle terms when available, or some quantifying words when neither of the preceding can be used to qualify, to diminish polarization.

D. Speaker Responsibilities

1. Determine the purpose: Every successful speaker has a clear and definite purpose in mind designed to achieve a special audience reaction. The three major purposes of a speech are:

   (1) To inform or teach. The speaker's purpose is to inform when he helps an audience to understand an idea, concept, or principle. A speech to inform the public about China's foreign policy would have a clear organization, and would contain supportive facts and illustrative examples and comparisons.

   (2) To Persuade. In the speech to persuade, the speaker wishes to change or reenforce existing beliefs, stimulate activity, or increase emotional involvement. A political speaker would attempt to influence the act of voting, while the March of Dimes speaker increases emotional involvement through the appeal of crippled children and attempt to gain contributions. A distinguishing feature of the persuasive speech is to appeal to the audience's emotions in addition to the appeal to the intellectual reasoning.

   (3) To entertain. A talk by Bob Hope would probably use humor to entertain an audience. Humor is not always used as a vehicle of entertainment. A talk on a safari to Africa would be entertaining because of the unusual subject, while a speech on moon explorations would entertain because of the high degree of interest.

An entertaining speech is characterized by information which is interesting, unusual, or humorous.

2. Gather support material: With the purpose in mind, the speaker must gather the necessary research material. The first step is to formulate ideas gained from previous experience, thus, it is possible to determine gaps in the knowledge which indicates areas of needed research. The second step is to draw on the experience of others. Interested personnel may provide useful insight, but the most fruitful source is the expert.

While personal knowledge coupled with ideas of others provide useful information, the next step is to narrow the topic and thoroughly research the relatively small areas of knowledge. The third step can be gained through the use of modern libraries providing a wide range of materials such as books, popular magazines, professional journals, abstracts, dissertations, microfilm, and microfische.

3. State the purpose: An absolute necessity for an effective speech is to state the purpose. The points should be stated clearly and concisely at the beginning of the speech so that the audience knows what can be expected from the rest of the speech. If a teaching situation is involved, the objectives should be specifically stated along with key points to be covered. If the purpose is clearly stated, the process of establishing rapport is greatly enhanced.

4. Amplify and Support Key points: Key points should be supported by expanding material and evidence to support the speaker's premise. The speaker should choose the appropriate pattern he will follow to support his speech. The various patterns are described:

   (1) Time or chronological material. The chronogical pattern is used when the material is arranged according to the order in which a number of events took place. Most historical events are developed in this manner.

   (2) The spatial or geographical pattern is very effective in describing things. When using the spatial pattern the speech material is developed in some directional sequence, from east to west, top to bottom, from center to outside, or some similiar space relation.

   (3) The topical pattern. This pattern is used when the subject contains divisions well-known to both speaker and audience. For example, the Minuteman Intercontinental Ballistic Missile should be divided into discussions of the warhead guidance, and propulsion systems.

   (4) The cause and effect pattern. The cause and effect pattern does not lend itself to all topics. If used, the speaker may first emunerate specific forces, then point out results which follow; or he may first describe conditions, then discuss the forces which cause them.

(5) The problem-solution pattern. This pattern organizes material in terms of problems (needs) and solutions (plans). This method is effective with a persuasive speech. The speaker may convince the audience that a serious problems exists; therefore, the audience is receptive to the solution offered.

5. End the speech appropriately: The conclusion should bring the speech all together in a short, concise format. Review the major points in the same chronological method covered. Do not belabor the summary and try to stress everything covered during the speech.

E. Listener Responsibilities

1. CONCENTRATE on what is being said: Concentration is a very important part of the listening process because it sets one's mind on the task at hand and helps reduce the effect of distractors. It is impossible to listen to one thing and think about two or three others.

2. LISTEN AHEAD: Try to think ahead of the speaker. Distractors will be reduced, the mind will be set on the topic at hand, and key points of logic will not be lost. Care must be taken that one does not jump so far ahead that the speaker's ideas are lost because of trying to determine what he will or will not say.

3. WEIGH POINTS: If the speaker is using logic to express a key point, the listener should assess whether the logic is correct, whether there is enough logic, or do outside forces which bear on the subject make the speaker's rationale correct or incorrect.

4. REVIEW THE TALK: Subsummarize what the speaker has said at natural breaks in the speech. Determine if the speech has made sense up to that point, and in what direction the speaker will be traveling.

5. LISTEN TO THE WHOLE PERSON: A speaker does not speak with his voice alone. He uses facial expressions, body language, and voice modulation to reflect his own experiences and perhaps biases. If possible, information concerning the speaker's background, areas of interest, attitude, and philosophy should be explored to provide insight which will aid in understanding the speaker.

INFORMATION SHEET 1.4.1I

The Navy Training Program

INTRODUCTION

The Navy instructor is part of a large organization with many components working together to ensure the Navy's training needs are met. The successful instructor requires a clear picture of the mission of the Naval Education and Training Command, how the organizational components work together for effective and efficient training, and the systematic approach used in developing and managing training curricula.

REFERENCES:

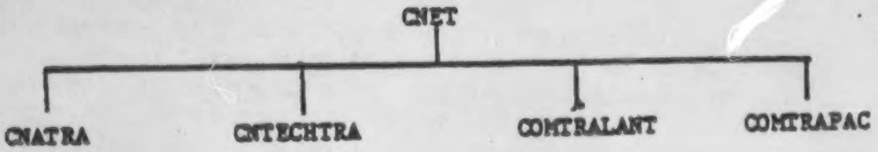
1. Learning Center Instructor Course A-012-0012 1.1N
2. NAVEDTRA 106A Interservice Procedures for Instructional Systems Development
3. NAVEDTRA 110 Procedures for Instructional Systems Development
4. CNTT A-67 Training Program Coordinators Handbook
5. OPNAVINST 5450.194 Mission and Functions of the Chief of Naval Education and Training
6. CNETINST 1500.12 Glossary of Navy Education and Training Terminology
7. CNETINST 1550.5 Policy and Doctrine for Instructional Systems Development
8. CNETINST 3500.3 Personnel Qualification Standards (PQS) Program

INFORMATION:

1. CNET MISSION: ENRICHMENT MATERIAL

The Chief of Naval Education and Training, under Chief of Naval Operations, is responsible for assigned shore-based education and training of Navy, certain Marine Corps, and other personnel in support of the Fleet, Naval Shore Establishment, Naval Reserve, Interservice Training Program, and Military Assistance and Foreign Sales Programs; develops specifically designated education and training afloat programs for the Fleet; acts as DOD agent for the Defense Activity for Non-Traditional Education Support (DANTES); executes the Navy's responsibility for dependents education; administers Navy support for youth programs; and participates with research and development activities in the development and implementation of the most effective teaching/training systems and devices for optimal education and training.

2. CNET ORGANIZATION CHART



The Chief of Naval Education and Training acts as the principal adviser to the CNO on all Navy education and training matters. As the OPNAV focal point for training, CNET monitors the quality of education and training, coordinates training requirements, priorities and plans, and budgets for and defends resource requirements. CNET also maintains close liaison with the warfare sponsors in OPNAV and other major staff commands to ensure their training interests and requirements are identified, justified, and supported.

CNET has four functional commands reporting to him:

a. Naval Air Training Command (CNATRA) which manages the training of pilots and naval flight officers.

b. Naval Technical Training Command manages all recruit training and most resident schools (Class A and C) and Class F Schools dealing with air maintenance training, although operational control of NAMTRADETS belongs to aviation type commanders.

c. COMTRALANT and COMTRAPAC manage some specialized training and functional training which consists largely of team and operational training to satisfy the needs of the fleet.

3. Instructional Modes:

The Navy has always made every effort to adopt the most effective ways of presenting its course material to the student to provide the best trained man to fill a specific billet in the fleet.

Self-paced Instruction -

In recent times, instructional technology has developed to the point that converting many Navy courses to the self-paced mode has become feasible. In a self-paced course, there are no lectures; rather, the student is permitted to progress at his own optimum rate. The role of the instructor has changed from an "importer of knowledge" to a "supervisor of learning." The instructor assists the student on specific areas where he has difficulty, and guides the student through the media, and resources which are available for the student in the "learning center." Frequently, a computer is used to track a student through the course and direct his progress based on the student's test performance.

While the current trend is toward individualization, some courses are not adaptable to the self-paced concept. For example, where expensive equipment is used, relatively few students are to be trained, or team training is important, self-pacing loses much of its cost-effectiveness.

Group-paced Instruction -

Until recently, all Navy training has been taught in a conventional manner using lecture and discussion in the classroom, and demonstration and practice techniques in the shop or laboratory. Various training devices, audio-visual materials, trainers, models, mock-ups, etc. increased the effectiveness of this training. Most group-paced courses include a significant number of laboratory classes where the student can immediately apply the knowledge he receives. These conventional courses, also called "group-paced" are geared to the rate at which the "average student" can learn. Provision is made for remedial/repeat instruction for slower students and acceleration for faster students, and some group-paced courses employ "regular" and fast tracks to accommodate individual differences. Programmed instructional materials are also frequently available in group-paced courses to assist student progress.

4. INSTRUCTIONAL SYSTEMS DEVELOPMENT

The official Navy approach to course development or revision is Instructional Systems Development (ISD). This approach is a systematic, analytical process which allows us to:

1. Determine what the needs of the fleet are.

2. Plan training to meet fleet needs.

3. Plan what students will be able to do at the end of each phase of training.

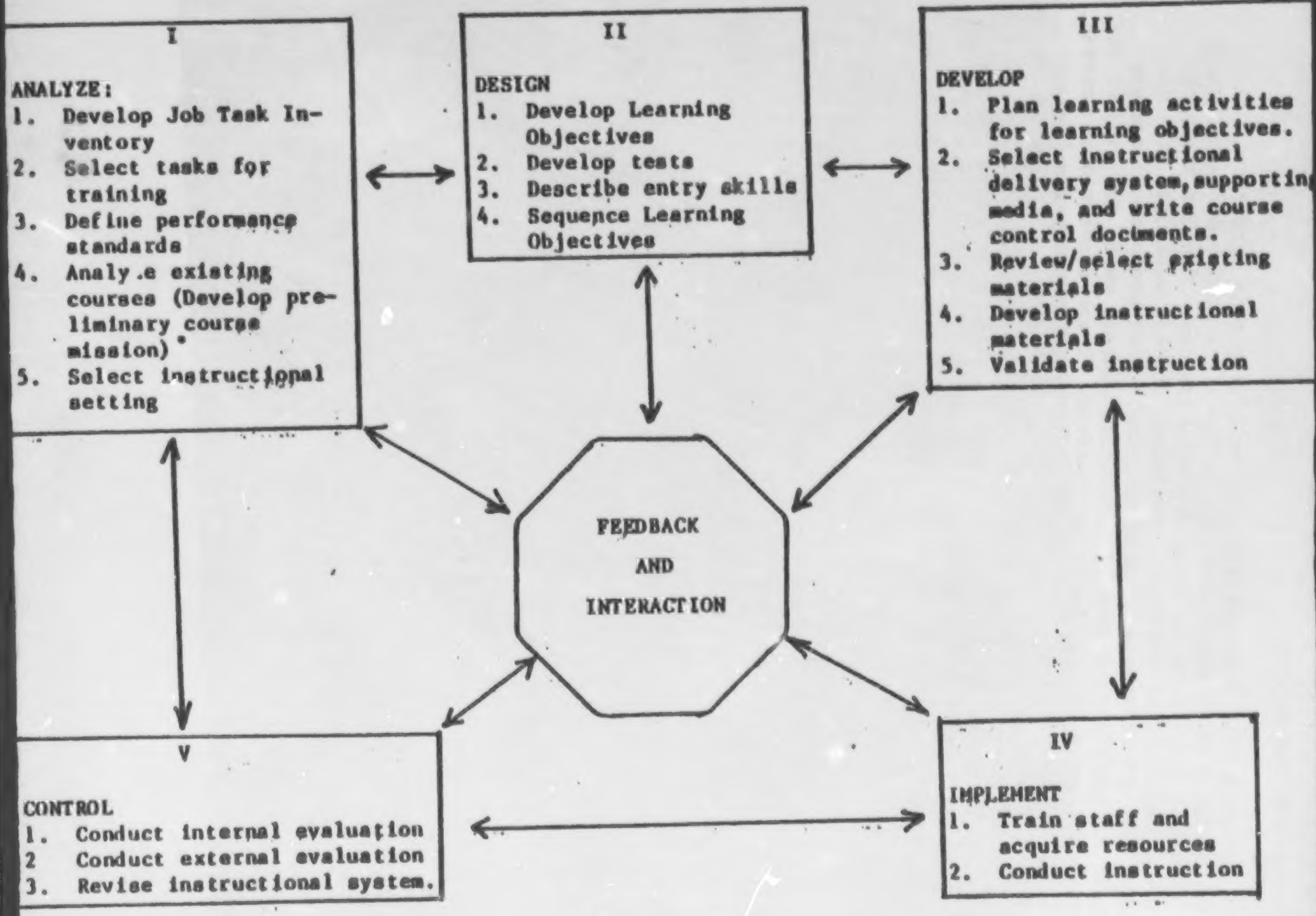
4. Select, for each segment of instruction, those methods and media which will be most effective.

5. Develop appropriate instruction.

6. Validate the instruction to ensure that the instruction achieves its goal.

7. Continually evaluate and modify the training to meet changing needs.

The following is a block diagram of the phases that are to be carried out when developing curricula for a course. It is laid out as it appears in NAVEDTRA 106A.


I
ANALYZE:
1. Develop Job Task Inventory
2. Select tasks for training
3. Define performance standards
4. Analyze existing courses (Develop preliminary course mission)
5. Select instructional setting
II
DESIGN
1. Develop Learning Objectives
2. Develop tests
3. Describe entry skills
4. Sequence Learning Objectives
III
DEVELOP
1. Plan learning activities for learning objectives.
2. Select instructional delivery system, supportin media, and write course control documents.
3. Review/select existing materials
4. Develop instructional materials
5. Validate instruction
FEEDBACK AND INTERACTION
IV
IMPLEMENT
1. Train staff and acquire resources
2. Conduct instruction
V
CONTROL
1. Conduct internal evaluation
2 Conduct external evaluation
3. Revise instructional system.

ISD FLOWCHART

MISSING MATERIAL

PHASE II - DESIGN

II.1

DEVELOP OBJECTIVES

Beginning with Phase II, the ISD model is concerned with designing instruction using the job analysis information from Phase I. The first step is the conversion of each task selected for training into a terminal learning objective. Each terminal learning objective is then analyzed to determine learning objectives and learning steps necessary for mastery of the terminal learning objective.

OUTCOME

A learning object for and a learning analysis of each task projected for instruction.

II.2

DEVELOP TESTS

Tests are designed to match the learning objectives.

OUTCOME

Test items to measure each learning objective.

II.3

DESCRIBE ENTRY BEHAVIOR

A sample of students is tested to ensure that their entry behaviors match the level of learning analysis.

OUTCOME

A test of entry behaviors to see if the original assumptions were correct.

II.4

DETERMINE SEQUENCE AND STRUCTURE

Finally a sequence of instruction is designed for the learning objectives.

OUTCOME

The sequence of all tasks selected for training.

PHASE IV - IMPLEMENT

IV.1

IMPLEMENT INSTRUCTIONAL MANAGEMENT PLAN

Staff training is required for the implementation of the instructional management plan and the instruction. Some key personnel must be trained to be managers in the specified management plan.

OUTCOME

Staff trained to conduct the instruction and required resources on hand.

IV.2

CONDUCT INSTRUCTION

The instructional staff must be trained to conduct the instruction and collect evaluative data on all of the instructional components. At the completion of each instructional cycle, management staff should be able to use the collected information to improve the instructional system.

OUTCOME

A completed cycle of instruction with information needed to improve it for the succeeding cycle.

PHASE III - DEVELOP

III.1

SPECIFY LEARNING EVENTS/ACTIVITIES

The instructional development phase begins with the classification of learning objectives by learning category so as to identify learning guidelines necessary for the optimum learning to take place.

OUTCOME

The classification of Learning Objectives by Learning Category and the identification of appropriate learning activities for each objective.

III.2

SPECIFY INSTRUCTION MANAGEMENT PLAN AND DELIVERY SYSTEM

Determine how instruction is to be packaged and presented to the student. Accomplished through a media selection process which takes into account such factors as learning category and guideline, media characteristics, training setting criteria, and costs. Instructional management plans are developed to allocate and manage all resources for conducting instruction.

OUTCOME

The media selections for instructional development and the instructional management plan for conducting the instruction and course control documents containing information on time, space, resources and staff requirements.

1.4.1.7

III.3

REVIEW/SELECT EXISTING MATERIALS

Techniques are formulated for the careful review and adaptation of existing materials

OUTCOME

The analysis of packages of any existing instruction that meets any given learning objectives.

III.4

DEVELOP INSTRUCTION

Instructional materials are selected or developed

OUTCOME

The development of instruction for all learning objectives where existing materials are not available.

III.5

VALIDATE INSTRUCTION

A course "tryout" when materials are validated on the basis of empirical data obtained from groups of typical students.

OUTCOME

Field tested and revised instructional materials; course ready for implementation.

PHASE V - CONTROL

V.1

CONDUCT INTERNAL EVALUATION

Evaluation and revision of instruction are carried out by personnel who preferably are neither the instructional designers nor the managers of the course under study. The first activity (internal evaluation) is the analysis of learner performance in the course to determine instances of deficient or irrelevant instruction. The evaluation team suggests solutions for the problems.

OUTCOME

Data on instructional effectiveness.

V.2

CONDUCT EXTERNAL EVALUATION

In the external evaluation, personnel assess job task performance on the job to determine the actual performance of course graduates and other job incumbents.

OUTCOME

Data on job performance in the field.

V.3

REVISE SYSTEM

All collected data, internal and external, can be used as quality control on instruction and as input to any phase of the system for revision.

OUTCOME

Instructional system revised on basis of internal and external evaluations.

INFORMATION SHEET 1.5.1I Date: August 1979

TITLE: LEARNING OBJECTIVES

INTRODUCTION:

Most of us have a goal in life and we try to achieve it in any way we can. Without a goal or objective we would get nowhere. If you don't know where you're going, it is difficult to select a suitable means for getting there. Surgeons don't select tools until they know what operation they are going to perform. Builders don't select materials or specify schedules for construction until they have their blueprints before them. Before a ship gets underway, the navigator must carefully review charts and tide tables to ensure a safe voyage. Similarly, before an instructor faces his class, he must have specific guidelines, in advance, directing him where to take his students during the course of instruction. The instructor always carries with him a set of goals to navigate by--instructional goals, which specifically define both what he intends to teach, and what he expects each learner to learn. These specific measurable goals of instruction are called "learning objectives."

REFERENCES:

1. NAVEDTRA 106A, Interservice Procedures for Instructional Systems Development
2. NAVEDTRA 110, Procedures for Instructional Systems and Development
3. NAVPERS 93913, Preparation of Learning Objectives
4. MAGER, R. F., Preparing Instructional Objectives

INFORMATION:

A. Definition of a Learning Objective

A learning objective is a clear, concise statement of the behavior or performance expected of a student as the result of a learning experience, expressed in terms of the behavior, the conditions under which it is to be exhibited, and the standards to which it will be performed or demonstrated. Learning objectives describe an intended RESULT of instruction rather than the PROCESS of instruction itself.

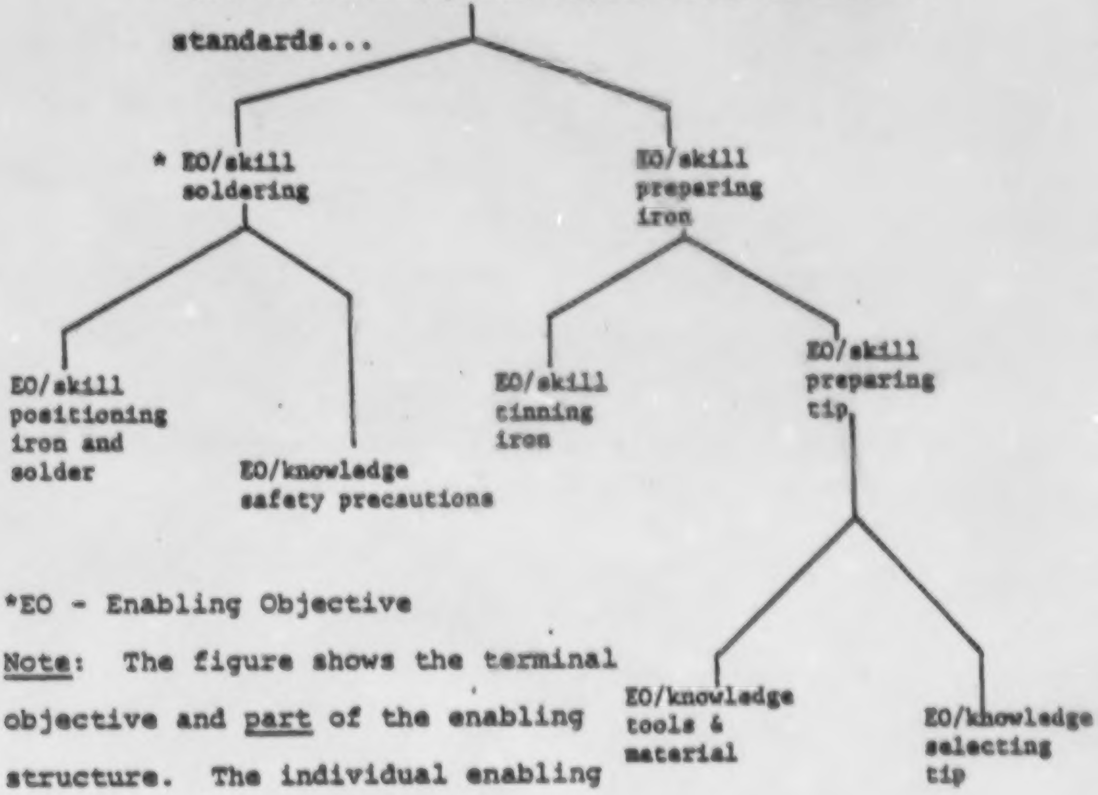
B. Purposes of Learning Objectives

1. Serve as a basis for selecting and designing course materials in order to attain the instructional intent of the course.
2. Define the behaviors students must exhibit at the end of instruction, thus providing a means for the student to organize his efforts and achievements in order to attain the instructional intent.
3. Provide guidance to ensure accurate and effective testing for assessing the effectiveness of the instruction.
4. Provide course managers a basic understanding of course content.
5. Provide a basis for improving instruction.
6. Cause the developers to think deeply and seriously about what is worth teaching.

7. The "enabling structure" is the chain of skills and knowledge essential to reach a terminal objective.

Terminal Objective

Given a 50-100 watt soldering iron, solder, flux, tools, and wire (size 18-24), the student will solder two wires together. The solder joints must mechanically and electrically conform to standards...


* EO/skill soldering
EO/skill preparing iron
EO/skill positioning iron and solder
EO/knowledge safety precautions
EO/skill tinning iron
EO/skill preparing tip
EO/knowledge tools & material
EO/knowledge selecting tip

*EO - Enabling Objective

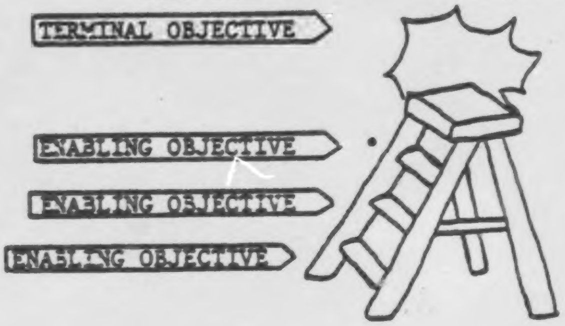
Note: The figure shows the terminal objective and part of the enabling structure. The individual enabling objectives are abbreviated for the purpose of illustration. Notice the great variety of enabling skills needed to reach the terminal objective of soldering two wires together.

C. Levels of Learning Objectives

1. Terminal Objective--a three-part learning objective expressed in terms keyed to a task (job related) as listed in the Job Task Inventory to help the student achieve the course mission (course objective). It describes behavioral actions, performance conditions, and the attainment standards expected of the student upon completion of instruction. The first step in writing objectives is to prepare a terminal objective for each task selected for training.

2. Enabling Objective--a three-part learning objective which helps the student achieve a terminal objective. It describes the behavioral actions, performance conditions, and attainment standards of an intermediate step the student must learn in order to perform a task. Enabling objectives are written with conditions and standards appropriate to the training environment. They support one or more terminal objectives.

3. A simple illustration may help to grasp the relation between a Terminal Objective and an Enabling Objective.



The TO is the final step--the end of the process.

The EO's are the steps that the student must go through in order to be able to perform the TO.

D. Characteristics of Learning Objectives

All learning objectives can be broken down into three characteristics or major elements. These characteristics help make an objective communicate an INTENT. They also answer three questions; (1) What should the student be able to do?; (2) Under what conditions do you want the student to be able to do it?; and (3) How well must it be done. These characteristics will be discussed in detail below. A simple but direct, example of the three characteristics is:

Behavior--add a column of numbers
Condition--without mechanical assistance
Standard--in 2 minutes without error.

1. BEHAVIOR OR PERFORMANCE - Identifies what the student will do to demonstrate what he has learned. This is the most important and indispensable characteristic of a useful objective in that it describes the kind of behavior that will be accepted as evidence that the student has mastered the objective. If a statement doesn't state a behavior, then it isn't an objective.

   The behavior element consists of three parts: (1) the subject which is always the student (can be implied);

   (2) Verb must reflect behaviors that are;

      Observable
      Measurable
      Verifiable
      Reliable (not prone to varying interpretation)

(a) The behavior may contain two verbs

1. The first indicates the category of the objective being written
2. The second indicates how the learner will perform the behavior
3. If there is NO doubt about what the student is going to do, only one verb is required
4. If there is any doubt, add a second verb to indicate how the student is to perform the behavior
5. EXAMPLES;
   - a. Two verbs;DESCRIBE , in WRITING, the relationship between Force, Mass and Acceleration
   - b. One verb, ADJUST a carburetor
6. While in I.B.C., the following single verbs may be used: List, Match, Label, Decode, Solve, Select, Compute, Calculate, Discriminate, Convert and any verbs that are categorized as physical skill verbs.
7. The following verbs require a second verb: Identify, Classify, Categorize, State, Name, Describe, Relate, Express, Analyze and any mental skill verbs not listed above.

(3) Object - indicates what is to be acted upon

2. CONDITION - Identifies the LIMITING OR AIDING circumstances under which the behavior will be performed. LIMITING CONDITIONS set limits or restrictions on the performance of the studnet. AIDING CONDITIONS provide help or assistance to the student in the performance of the behavior. Examples of conditions are the tools and equipment the student must use, special aids or manuals, environmental or weather conditions and special physical demmads.

   a. Examples of limiting condition are indicated by the underlined portion of the following:

      1) Fieldstrip the .45 cal pistol while blindfolded.

      2) Don a life jacket in a darkened room . . . . . .

      3) Compute the surface area of a sphere without the use of a calculator . . . .

   b. Examples of aiding conditions are indicated by the underlined portion of the following;

      1) Trace the signal flow through the receiver, using the schematic diagram provided . . . . . .

      2) Align the IF strip of a radio receiver. Use of the service manual is permitted . . . .

      3) Type a letter, given a 200 word rough draft . .

   c. A learning objective may require more than one limiting or aiding condition, or a combination of both limiting and aiding conditions in order to

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secure the desired behavior. In such cases, additional circumstances can be included. For example, the student could be required to "Use the proper tools to build a frame house, given the boards cut to size."

3. STANDARD - specifies the criterion or level of proficiency which the demonstrated behavior must meet. Standards are stated in terms of how well and are usually expressed in terms of completeness, accuracy, or time.

   a. Completeness

      (1) The precise nature of the output

         Ex: The definition must include the relationship of the force to acceleration and mass. Format must be correct as outlined in NAVEDTRA 110.

      (2) Number of features that the output must contain

         Ex: The critique must contain 3 advantages and 3 disadvantages. The carburetor must idle at its smoothest point.

      (3) Number of steps, points, pieces, etc., that must be covered or produced.

         Ex: All 10 steps must be performed

      (4) Any quantitative statement that indicates acceptable portion of total

         Ex: Given a rough draft, type pages without error at a minimum rate of 20 pages per day.

b. Accuracy,

   (1) How close to correct the performance must be

      Ex: 100, 80%, 4 of 5 correct, without error

   (2) Exact numbers reflecting tolerances

      Ex: within ± 0.01; to the nearest tenth

   (3) Values or dimensions that acceptable answers/ performance can assume

      Ex: Must withstand shear test of 15.6 pounds

c. Time

   (1) How many days, hours, minutes, seconds can be used to demonstrate the behavior

      Ex: Within 3 minutes

Analysis to the Task of Mowing the Lawn

The end task or performance--Terminal Objective--is to mow the lawn. References are checked, people are interviewed, observations are made of people actually doing the task, the data is determined on what is required to mow the lawn. As an example, the following behaviors were determined:

1. Perform pre-operation check
2. Start the mower
3. Push the mower

These three actions or behaviors make up the requirements necessary to mow the lawn. Each will be developed into an enabling objective. To have an objective all three characteristics are required. The behaviors have been defined so now the conditions and standards must be determined. What conditions could be expected in the performance of these behaviors?

1. A fully fueled and serviced lawn mower is the essential tool to be used.
2. No special aids are needed except an operator's guide for the mower.
3. The behavior will only be performed in dry spring or summer weather.

What standards could be expected in the performance of these behaviors?

1. The lawn must be mowed over 95% of the grassy area.
2. After mowing, the grass must be between 1/2 and 3/4 inches long.
3. The task must be performed in a maximum of one hour.

Now that the behaviors, conditions and standards have been determined the learning objectives can be developed as follows:

TERMINAL OBJECTIVE:

Behavior: Mow the lawn

Condition: Given a lawn and a fully serviced lawn mower in dry, spring or summer weather

Standard: The lawn must be mowed over 95% of the given area. The grass must be between 1/2 and 3/4 inches long and the task must be accomplished in a maximum of one hour.

ENABLING OBJECTIVES:

Behavior: Perform pre-op checks

Condition: Given a lawn and a lawn mower on a dry spring or summer day

Standard: The operator will perform all pre-op checks prescribed in the operator's guide.

Behavior: Start the mower

Condition: Given a lawn and a lawn mower on a dry spring or summer day

Standard: The operator will start the mower within two minutes of completion of the pre-op checks.

Behavior: Push the mower

Condition: Given a lawn and a lawn mower on a dry spring or summer day

Standard: The mower must be pushed over 95% of the area.

Each of these learning objectives are visible, measurable criteria that can be used to build instruction and measure student performance. There are a few things to keep in mind:

1. Learning objectives are based on the idea that student learning must be capable of being demonstrated in some way. If demonstration is not possible, then the instruction is a waste of time. At the completion of training based on learning objectives, the students are required to demonstrate knowledge, skills or other desired behaviors.
2. Since learning objectives represent the performance goals toward which the students are striving, THEY MUST ALWAYS BE KNOWN TO THE STUDENTS. The learning objectives should be included in all student handout materials as well as in the lesson topic guide used by the instructor. Remember the enabling objectives are the specific "rungs in the ladder" that the student must

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learn and be able to perform in order to achieve the terminal objective.

E. Learning Objective Categories

Each identified learning objective action statement is placed in one of four learning categories: information/knowledge, mental skills, physical/manual skills, and attitudes. Each category is analyzed differently to expand the action statement into complete learning objectives and to identify lower level prerequisite objectives. The learning categories also facilitate sequencing the instruction.

1. Information/Knowledge. The specific information or facts supporting successful skill performance. Identify the knowledge a student must be able to recall or state in order to achieve the learning objective. Example: "In writing, without the aid of classroom notes, DEFINE Ohms Law. 100% accuracy is required.

2. Mental Skills: The active mental processes that call for rapid, accurate, and expert performance of a task such as identifying, classifying, applying rules, and solving problems. It is particularly important to identify the mental skills that a student must possess in order to solve a problem. Example: Given draft readings and tables, COMPUTE displacement for any class ship. Displacement must be computed within ± 5% of actual answer.

3. Physical/Manual Skills: Physical or manipulative activity that requires movement of some of the muscles so the body which are directly observable.
   Example: "Field-strip and assemble .45 cal pistol under conditions of total darkness IAW FM-4-1".
4. Attitudes: Not always directly observable but reflected in the choices a person makes or the behavior exibited by the person. In most cases attitude measures will not be used. In cases where attitude measures are desired, it is best to determine what a person would do if he or she had the desired attitude.
   Example: "Given a job task the student will demonstrate a safe approach to the task without error".

F. Checklist for Evaluating Learning Objectives

1. Is each terminal and enabling objective, stated in student rather than instructor terms, i.e., actions which the student will perform rather than what the instructor will say or do?
2. Does each terminal and enabling objective specify the behavior, condition(s), and standard(s) which can be measured by a test?
3. Can the behavior called for be observed and subjected to measurement within the learning and testing environment?
4. Can the behavior statements of a terminal or enabling objective be improved by the addition of a second clarifying verb?

5. Does each behavior specifically describe all actions that will demonstrate that learning has occurred?
6. Does each terminal or enabling statement of conditions describe exactly what the student will work with, i.e., tools, equipment, technical orders, checklist situations?
7. Does each terminal and enabling objective specify in measurable terms the required standards or criteria which must be accomplished?
8. Can a terminal or enabling objective be clarified by adding additional statements of conditions and/or standards in order to secure the desired behavior?
9. Is the assignment of each terminal or enabling objective to a learning category documented in the LOAW?
10. Do the enabling objectives convey the level of detail needed to design instructions.

H. Learning Objective Analysis Worksheet CNET-GEN 1540/4

The Learning Objective Analysis Worksheet (LOAW) provides a convenient means of keeping track of all objectives, both enabling and terminal. The LOAW is an essential document which will be used repeatedly throughout the ISD process. Every terminal and enabling objective developed for a course will be entered on a LOAW.

1. COURSE
   a. Title of the course and the CANTRAC number
   b. For practice teaching (PT) lessons use (INSTRUCTOR TRAINING COURSE) A-012-0011.
2. UNIT/MODULE
   a. Number is assigned by the task analysis team (i.e. One, Two, Three, etc.) depending on how the course is segmented.
   b. For PT's use Unit One.
3. LESSON TOPIC
   a. This number is assigned after the learning objectives have been sorted into a teaching sequence.
   b. Identifies the unit and the lesson within the unit.
   c. Example: 1.1

      Lesson Topic One

      Unit One
   d. For PT's use Lesson Topic 1.1 for the first PT, Lesson Topic 1.2 for the second PT, etc.
4. TASK I. D. NUMBER
   a. Task identification number from the Job Task Analysis.
   b. Provides for an audit trail so that the LO may be traced back to a specific job task.
   c. For PT's leave this block blank.
5. PAGE NO.
   a. Learning objective page number; The number of the page where the learning objective appears in sequence.
   b. For PT's, number as appropriate.
6. TERMINAL
   a. Check this box if a terminal objective is identified.

7. TERMINAL OBJECTIVE NO.
   a. Enter the terminal objective number (i.e. 1.0, 2.0, 3.0, 4.0, etc.).
   b. For PT's use terminal objective number 1.0.

8. JPM NO.
   a. Leave blank.

9. ENABLING OBJECTIVE NO's THAT SUPPORT THE TERMINAL OBJECTIVE
   a. Enter the EO numbers that support the TO identified.
   b. For PT's use the EO numbers assigned/required to teach the lesson.

10. ENABLING
    a. Check this box if an enabling objective is identified.

11. ENABLING OBJECTIVE NO.
    a. A three-digit number that identifies the lesson topic and the objective number within the lesson topic
    b. Example: 1.1.1

       First EO in Lesson Topic 1.1

       Lesson Topic 1.1
    c. For PT's number EO's in accordance with the lesson topic that teaches the EO.

12. TERMINAL OBJECTIVE NO. SUPPORTED
    a. Enter the TO numbers supported by this EO
    b. For PT's use TO 1.0.

13. LEARNING OBJECTIVE ACTION STATEMENT
    a. Write the behavior or performance statement here in behavioral terms.

14. CONDITION

    a. List the condition(s) that apply to the behavior performance.

15. STANDARD

    a. Specify the level of proficiency required when demonstrating the behavior.

16. LEARNING CATEGORY

    a. Assign one of the four learning categories:

        (1) Informational

        (2) Mental skill

        (3) Physical skill

        (4) Attitude

17. MEDIA SELECTION

    a. List the media requirements.

18. EQUIPMENT REQUIRED

    a. List the equipment required for demonstrating the behavior.

19. On the following pages are completed examples of the LOAW.

NOTE: Test item construction will be covered in Lesson 1.19. Leave test item block on LOAW BLANK until further direction.

LEARNING OBJECTIVE ANALYSIS WORKSHEET

CNET-GEN 1550/4 (11-76) S/N 0107-LL-NFS-4730

NAVEDTRA 106A refers.

COURSE SUPERSECRET SEAL A-639-0077	UNIT/MODULE ONE	LESSON TOPIC 1.1	TASK I.D. NUMBER	PAGE NO. 1
Fill out one section only. ☒ TERMINAL	TERMINAL OBJECTIVE NO. 1.0	JPM NO.	ENABLING OBJECTIVE NOS. THAT SUPPORT THE TERMINAL OBJECTIVE 1.1.1, 1.1.2	
☐ ENABLING	ENABLING OBJECTIVE NO.	TERMINAL OBJECTIVE NO. THE ENABLING OBJECTIVE SUPPORTS		

LEARNING OBJECTIVE ACTION STATEMENT

Administer first aid

CONDITION

Under simulated battle conditions

STANDARD

In accordance with NAVTRA 12345A, First Aid Handbook

LEARNING CATEGORY

Physical skill

TEST ITEMS

MEDIA SELECTION

Flock-cards

EQUIPMENT REQUIRED FOR PERFORMANCE OF OBJECTIVE

Syrettes, one per student and two for the instructor

EXISTING MATERIALS SELECTED

☐ YES ☒ NO *If YES, outline below.*

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LEARNING OBJECTIVE ANALYSIS WORKSHEET

CNET-GEN 1550/4 (11-76) S/N 0107-LL-NF0-4730

NAVEDTRA 106A refers.

COURSE SUPERSECRET SEAL A-639-0077	UNIT/MODULE ONE	LESSON TOPIC 1.1	TASK I.D. NUMBER	PAGE NO. 2

Fill out one section only.

☐ TERMINAL	TERMINAL OBJECTIVE NO.	JPM NO.	ENABLING OBJECTIVE NOS. THAT SUPPORT THE TERMINAL OBJECTIVE
☒ ENABLING	ENABLING OBJECTIVE NO. 1.1.1	TERMINAL OBJECTIVE NO. THE ENABLING OBJECTIVE SUPPORTS 1.0	

LEARNING OBJECTIVE ACTION STATEMENT

Prepare syrette to administer shot

CONDITION

Given proper medical equipment

STANDARD

In less than (5) minutes

LEARNING CATEGORY

Physical skill

TEST ITEMS

MEDIA SELECTION

Flock-cards

EQUIPMENT REQUIRED FOR PERFORMANCE OF OBJECTIVE

Syrettes, one per student and two for the instructor

EXISTING MATERIALS SELECTED

☐ YES ☒ NO *If YES, outline below.*

LEARNING OBJECTIVE ANALYSIS WORKSHEET
CNET-GEN 1550/4 (11-76) S/N 0107-LL-NF9-4730

NAVEDTRA 106A refers.

COURSE SUPERSECRET SEAL A-639-0077	UNIT/MODULE ONE	LESSON TOPIC 1.1	TASK I.D. NUMBER	PAGE NO. 3

Fill out one section only. ☐ TERMINAL	TERMINAL OBJECTIVE NO.	JPM NO.	ENABLING OBJECTIVE NOS. THAT SUPPORT THE TERMINAL OBJECTIVE
☒ ENABLING	ENABLING OBJECTIVE NO. 1.1.2	TERMINAL OBJECTIVE NO. THE ENABLING OBJECTIVE SUPPORTS 1.0	

LEARNING OBJECTIVE ACTION STATEMENT

LABEL the parts of a syrette

CONDITION

When given an illustration

STANDARD

100% Accuracy

LEARNING CATEGORY

Informational

TEST ITEMS

MEDIA SELECTION

Chalkboard

EQUIPMENT REQUIRED FOR PERFORMANCE OF OBJECTIVE

Chalkboard and associated equipment

EXISTING MATERIALS SELECTED

☐ YES ☒ NO *If YES, outline below.*

INFORMATION SHEET 1.6.1I August 1979

TITLE: THEORIES/LAWS OF LEARNING

INTRODUCTION:

The primary reason students attend school is to learn. Instructors were selected because they possess skills that will enable them to arrange school experiences so that learning will take place. The knowledge contained in this information sheet on the Theories/Laws of Learning will assist you in selecting an effective approach to any learning situation.

REFERENCES:

1. NAVEDTRA 10058-B, Human Behavior and Leadership, Chaps. 3, 7, and 11.
2. AF Manual 50-62, Principles and Techniques of Instruction.
3. Neihler. Robert F., Psychology Applied to Teaching, Chaps. 7 and 8.
4. Klausmeier and Goodwin, Learning and Human, 4th Edition, Chaps. 3, 6, 12, 13, and 14.
5. Pitner, Ryan, West, Aleck, Crow, Smith, Education Psychology, 6th Edition, Chaps. 5 and 6.

INFORMATION:

A. Definition of Learning

   1. A change in an individual's behavior as a result of acquiring a new knowledge, skill or attitude. Learning is divided into four learning categories.

B. Theories of Learning

   1. Association Theory Group - the connection of a specific response to a given stimulus.

      a. Stimulus - a situation, circumstance, sensation or action that causes a behavior to occur.

      b. Response - an action or behavior elicited by a specific stimulus.

c. Learning is the process of building new S-R bonds and organizing them into a system; or results in the forming of habits by the connection of stimuli and response that previously did not exist.

d. EXAMPLES:

STIMULUS	RESPONSE
(1) See a RED light while driving a vehicle.	(1) Stop the vehicle
(2) Who was the first United States President?	(2) George Washington

e. Additional names associated with this group

   (1) Classical conditioning

   (2) Instrumental conditioning

   (3) Connectionism

   (4) Stimulus-Response

2. Cognition Theory Group - The act of knowing, with emphasis placed on insight and development of perception.

   a. Simple S-R bonds are too limited to explain such complex learning as understanding concepts and ideas.

   b. Insight - the solving of a problem through understanding the relationship of the various parts of the whole problem.

   c. Perception - becoming aware through sensory experiences.

   d. Closely approaches the process of trial and error or trial and success.

   e. Example:

   Chimpanzee, in a cage with stacking boxes and bannanas hanging from overhead, saw a relationship and stacked the boxes to reach the bannanas.

   "Ah-ha" learning.

BROADER ENRICHMENT MATERIAL

Brain-based Theory - acquisition of useful programs.

a. According to this theory the brain operates by programs or goal oriented sequences.

b. Adults have built and stored many hundreds of thousands of programs - repair a radio, disassemble a M-16, cook a meal, drive a car, budget money, etc.

   (1) We select the appropriate program and let it play like a phonograph record.

c. Usually we know what program to select, because we recognize the pattern of the situation and the need. "Insight" from the Cognition Theory becomes "recognition" of key patterns that apply to a situation or problem in the Brain-based Theory.

d. When we do not recognize the need or situation pattern we must begin (learn) building a new program. Students can only use programs already built and stored in the brain.

e. Students do not acquire (learn) programs by accepting or recording information from an instructor or by taking tests.

f. Learning is achieved only by the student's own efforts since each brain admits, processes and uses only what that particular brain selects.

g. Because students differ enormously in the number and types of programs they have stored in their brains, we cannot expect students to use programs they do not have recorded. An instructor cannot expect student "A" to possess a certain program just because students "B, C, and D" possess it.

h. Guidelines for instruction

   (1) Instructors should use a wide variety of approaches, analogies, examples and materials in helping students to acquire the necessary programs.

   (2) Provide the students to utilize repeatedly the insights they have acquired.

   (3) Prevent student from "doing it wrong".

(4) Students learn best when they deal with real objects, real problems, real situations, as opposed to contrived or simulated activities.

C. The Ways That a Student Learns

1. Imitation

a. Duplicating the observed actions of others.

b. Most basic way of learning.

c. The instructor's obligation is to set the desired example.

2. Conditioning

a. The process by which an automatic response is established for a given stimulus.

b. Instructor must provide drill and practice.

(1) Conditioning depends on exercise.

3. Trial and Error

a. Selecting, after repeated efforts, the method that has proved to be most successful.

b. The instructor must provide supervision

(1) May be harmful to student or the equipment.

c. The instructor must provide encouragement

(1) Repeated efforts may be discouraging

d. The student requires background of the job that he is doing

4. Association - A Mental Process

a. The comparison of past learning to a new learning situation.

b. The instructor must make as many analogies, associations or examples as possible to aid student understanding.

5. Insight

- a. The recognition of a relationship between the various factors in a problem situation
- b. Instructor must recognize and compensate for individual differences in the student's ability to gain insight
- c. Student background affects insight
- d. Subject matter sequence affects insight
- e. Avoid being impatient with your students
  - (1) Insight may be a sudden or a lengthy process
- f. Make associations for the student
- g. Provide assistance for the students

6. Transfer - Performance
   - a. Applying past learning to a new learning process
   - b. For the student to achieve transfer you must teach it
   - c. Transfer is dependent upon retention, recall, and student ability
   - d. Instructor must: to teach for transfer
     - (1) Make the student desire to learn and remember
     - (2) Make initial learning meaningful
     - (3) Avoid faulty organization
     - (4) Provide for sequential and cumulative learning
     - (5) Emphasize related concepts and principles

D. The Laws of Learning

1. The Law of Readiness - The individual learns best when he is ready to learn
   - a. Physically, mentally and emotionally ready to learn
     - (1) Prepare the lesson
     - (2) Prepare the classroom

- (3) Prepare the students
    - (a) The students must have the necessary background to be able to understand the materials.
    - (b) The students must have the active desire to reach a learning goal, i.e., motivation

2. The Law of Effect - The individual will learn those things which seem profitable to him or which are attended with pleasure.
    - a. Bring out the need and value of the material being presented
    - b. Make the learning process satisfying to the student
    - c. The best path of learning is from success to success. Teach so the students can achieve success.
3. The Law of Primacy - Others things being equal, the individual tends to learn better and retain longer, his first learning in a new field
    - a. Teach the correct way first
        - (1) Correct all errors immediately
    - b. Teach in lgoical sequence
4. The Law of Intensity - A vivid experience is learned better
    - a. Appeal to as many senses as possible
        - (1) Used colored and various types of training aids to emphasize important points.
        - (2) Practice effective oral delivery
        - (3) Initiate and maintain class participation
        - (4) Use isntruction sheets
        - (5) Use actual rather than simulated experiences when feasible.
5. The Law of Exercise - The individual learns by practice and repetition

a. Learning must be meaningful and correct

b. Students learn best by doing, not by listening

c. Repeat important points

d. Review at appropriate intervals

e. Provide for student application using variety of methods

6. The Law of Recency - Stimulus and response being equal, those things learned most recently will be remembered better than those learned in the past (timewise).

   a. The further a student is removed timewise, form a new fact or procedure the more difficulty he/she has in remembering it.

   b. To maximize learning in the classroom

      (1) When presenting a new knowledge or skill, give extra assistance and encouragement to the slow learner.

      (2) Make the most of initial interest and enthusiasm.

      (3) When a leveling off improvement occurs, either encourage continued practice to maintain the skill or help students master advanced techniques.

E. Theories of Forgetting

1. Disuse - persons forget what they do not use; this knowledge is locked in the recess of the mind and is difficult to summon up.

   a. To combat disuse

      (1) An instructor should make his/her students learn things well in the beginning. Brain patterns fade more slowly if they are well established in the beginning.

      (2) Make use of recitation, examples and test questions that provide repeated exposure to the subject. Thus, giving the student the opportunity to apply the ideas or methods they have learned.

   (3) Have frequent review sessions, before exams, between the introductory and advanced course and during each lesson topic.

2. Interference - forgetting because another experience overshadows. New events displace old, closely related or material not well learned.

   a. To combat interference

      (1) Help student to thoroughly master the material at the start. Material learned well is less likely to be displaced by new material.

      (2) Provide distributed study periods, dividing long subjects into smaller parts.

      (3) Alternate between extremely difficult and easier lesson topics.

         (a) Studies of forgetting reveal that the greatest amount of interference occurs when one extremely difficult activity is followed by another difficult activity.

3. Repression - forgetting due to submersion caused by unpleasant material but not intentionally done.

   a. To combat repression

      (1) Make the classroom and the instruction as pleasant and enjoyable as possible.

   b. In order to minimize forgetting

      (1) Make frequent use of repetition, recitation, application, tests and review.

      (2) Students will always forget part of what they learn. Utilizing the previous techniques will not eliminate forgetting but it will decrease the rate at which students forget the learning that has occurred.

INFORMATION SHEET 1.7.1I August 1979

TITLE: SPECIFIC REQUIREMENTS FOR THE 20-MINUTE PRACTICE TEACHING EXERCISE LESSON #1

INTRODUCTION:

The purpose of this information sheet is to outline the requirements necessary for satisfactory performance of a 20-minute practice teaching exercise.

REFERENCE:

1. Instructor Training Course A-012-0011

INFORMATION:

A. Specific Requirements

1. Select a topic. DO NOT select a topic of sex, religion, politics, or anything that could be dangerous to the human element. When in doubt obtain staff instructor approval first.

    a. Knowledge only is to be taught.

2. Write a terminal objective (there is no requirement for the terminal objective to be met). Information Sheet 1.5.1I applies.

3. Write a minimum of one enabling objective that supports the terminal objective (approximately 10-13 minutes of teaching material is required). Information Sheet 1.5.1I applies.

4. Perform an objective analysis for the enabling objective(s). Information Sheet 1.8.1I applies.

5. Develop a lesson topic guide (two copies) in accordance with Information Sheet 1.9.1I.

    a. Cover page
    b. Lesson topic elements
        (1) Introduction
        (2) Presentation
        (3) Summary
        (4) Application
        (5) Evaluation
        (6) Assignment

6. Annotate the lesson topic guide in accordance with Information Sheet 1.10.1I.

7. Method of instruction: Illustrated Lecture Method

8. Instruct a 20-minute knowledge type practice teaching lesson using the chalkboard/VAP and the illustrated lecture method.

B. Guidelines for Instructing the 20-Minute Practice Lesson

1. Introduction must include the following areas and be presented in the prescribed order:

   a. Establish Contact
   b. State the Lesson Objectives
      (1) Stated and displayed
   c. Establish Readiness
      (1) Motivating statements
   d. Lesson Overview (stated and displayed)
      (1) Topic
      (2) Major Teaching Points

RECOMMENDED TIME FOR AN EFFECTIVE INTRODUCTION: 3-5 MINUTES

2. Presentation

   a. Present an organized lesson using good oral delivery techniques, examples, explanations, analogies and associations.
   b. Use the chalkboard/VAP effectively to develop the lesson as it progresses.
   c. Use effective oral questions and questioning techniques to maintain good class participation. Oral questions must be asked throughout the lesson.

RECOMMENDED TIME FOR AN EFFECTIVE PRESENTATION: 10-13 MINUTES

3. Summary

   a. State the lesson objective(s).
   b. Briefly summarize each major teaching point.
   c. Use the chalkboard/VAP as appropriate to summarize the lesson.

4. Application--N/A

5. Evaluation

   a. Ask thought-provoking questions of the class to check for understanding of the lesson topic.

b. If students are unable to answer the questions reteach as necessary.

6. Assignment--N/A

RECOMMENDED TIME FOR THE SUMMARY, APPLICATION, EVALUATION AND ASSIGNMENT: 3-6 MINUTES.

ENTIRE LESSON SHOULD BE COMPLETED WITHIN 16-24 MINUTES.

C. Instructional Materials Development Checklist for Practice Teaching Lesson #1:

1. Prior to your practice teaching lesson date you are required to have the following items checked and approved by a staff instructor.

CHECKLIST	STAFF INSTRUCTOR/DATE
a. Topic......................	
b. Terminal Objective..........	
c. Enabling Objective(s).......	
d. Objective Analysis..........	
e. Lesson Topic Guide..........	
f. Annotated Lesson Topic Guide	

2. The following items must be provided to the staff evaluator just prior to presenting your practice lesson:

   a. Instruction Materials Development Checklist

   b. Copy of the Lesson Topic Guide

REMEMBER THAT PERFECTION IS ACHIEVED THROUGH PRACTICE. SPACES ARE AVAILABLE FOR YOUR USE TO PRACTICE THE LESSON PRIOR TO PRESENTING IT FOR FORMAL EVALUATION.

INFORMATION SHEET 1.8.1I AUGUST 1979

TITLE: LEARNING OBJECTIVE ANALYSIS (Knowledge)

INTRODUCTION: Through time it has become evident that students experience difficulty in developing teaching points to support objectives. The question asked is "where do I start?" An objective analysis is a process used to develop major and minor teaching points in support of a learning objective. The purpose of this information sheet is to define/format an objective analysis. Proper use of the data provided will allow effective analysis of learning objectives by breaking down the objective into small incremental parts for teaching. An objective analysis will be required for each learning objective used in lesson topic guide development for practice teaching lessons.

REFERENCE:

1. Instructor Training Course A-012-0011 Staff

INFORMATION:

A. Objective Analysis (Knowledge)

1. In a lesson topic guide the major teaching points are used to develop the lesson -- provide a general overview of lesson topic content. In support of the major teaching points come the heart of the lesson -- the minor teaching points. Minor teaching points directly support the major teaching points and must contain the "need to know" material necessary to teach the learning objective. Sub-minor teaching points may be used to stress further minor/major teaching points through example/sample etc., or may contain "need to know" information. Keep in mind you measure only the "need to know".

2. A recommended procedure to use in analyzing learning objectives for a knowledge lesson presentation is to:

   a. Arrange learning objectives in a logical teaching sequence. (Would normally be sequenced in the curriculum outline).

   b. Select the OBJECT of the action verb in the behavior characteristic of the first enabling objective, to be taught, as your major teaching point. The major teaching point may include all necessary modifiers for clarification.

c. Breakdown the major teaching point into as many small incremental blocks as necessary to explain thoroughly the learning objective.

d. Repeat steps b and c as necessary for the remaining enabling objectives.

e. It is recommended that there will be at least one major teaching point for each enabling objective.

f. In developing the objective analysis, utilize the following outline procedure:

I   Roman numerals consisting of one character are followed by three spaces; two-character numbers are followed by two spaces; three-character numbers are followed by one space. Used to indicate the six elements of a L.T.G.

- A. Capital letters are followed by a period and two spaces.
  - a. Lower case letters are followed by a period and two spaces.
    - (1) Arabic numerals in parenthesis are followed by one space.

NOTE:

Used to indicate minor teaching points.

- (a) Lower case letters in parenthesis are followed by one space.
  - 1. Arabic numerals underscored are followed by a period and two spaces.
    - a. Lower case letters underscored are followed by a period and two spaces.
      - 1) Arabic numerals with right parenthesis are followed by one space.
        - a) Lower case letters with right parenthesis are followed by one space.

(1) All subheads start under the first letter of the first word in the heading.

(2) No period is used at the end of a heading or subheading in a topical outline. Only the first word of the heading or subheading and proper names begin with a capital letter.

3. Format

OBJECTIVE ANALYSIS (KNOWLEDGE)

OBJ #1

OBJ #2

MAJOR	MINOR
A.	1.
	2.
	a.
	b.
	(1)
	(2)
	3.
	a.
	b.
B.	1.
	a.
	b.
	2.
	3.

OBJECTIVE ANALYSIS

Enabling Objectives

6.4.1 Without the aid of notes, the student will MATCH six types of valves to a correct statement that defines an application for each. 100% accuracy is required.

MAJOR TEACHING POINTS	MINOR TEACHING POINTS
A. Types of valves and their application	1. Globe Valve a. Considered a throttle valve (1) used partly open (2) used fully open (3) or used closed b. Used widely throughout engineering plants for a variety of services 2. Gate Valve a. Used where full flow or straight line flow is desired b. This type of valve is NOT a throttle valve and should not be used in the partly open position c. Gate valves are often used for fresh water systems

SAMPLE OBJECTIVE ANALYSIS

MAJOR TEACHING POINTS	MINOR TEACHING POINTS
	3. Needle Valve
	a. Used for making relatively fine adjustments in amount of fluid flow through an opening
	b. Valve is considered a throttle valve which allows precise control of fluid flow
	c. Uses vary from controlling fuel flow, refrigerant flow, to controlling oil flow to bearings
	4. Check Valve
	a. Used where flow in one direction is desired
	b. The suction and discharge lines of feed pumps, feedwater lines to a boiler, and air valves on automobile tires are examples of their application
	c. Generally check valves are used throughout the engineering plant

MAJOR TEACHING POINTS	MINOR TEACHING POINTS
	5. Steam Regulator a. Used for steam driven rotary and centrifugal pumps b. Used to control pump speed and reduce steam pressure
	6. Hydraulic Flow Control Valve a. Regulates flow of oil in hydraulic systems b. Found on steering systems and elevators to control speed of rams or cylinders

SAMPLE OBJECTIVE ANALYSIS

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: June 1979

COURSE TITLE: SHIPS MAINTENANCE (Mechanical) COURSE 8-702-0011

LESSON TOPIC: 6.4 TYPES OF VALVES

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 1 Period
Lab 0.0 Period

INSTRUCTIONAL MATERIALS:

Instructional References:

1. Plow, E.T., Valve Application.
2. Daily, I.P., Plumbing Procedures Chapter 9.

Instructional Aids:

Training Equipment:

1. Overhead Projector

Transparencies:

1. 6.4.1XP, Globe Valve
2. 6.4.2XP, Gate Valve
3. 6.4.3XP, Needle Valve
4. 6.4.4XP, Check Valve
5. 6.4.5XP, Steam Regulator

Transparencies (Cont'd)

6. 6.4.6XP, Hydraulic Flow Control Valve

Texts:

1. Randolf, R., Valves.
2. Door, W. T., National Code Book (Plumbing).

TERMINAL OBJECTIVE:

6.0 Troubleshoot and repair various valves found in naval applications in a laboratory; provided tools and equipment. The trainee will be required to follow job step procedures to 100% accuracy and each valve must have zero leak-off as determined by a hydrostatic test.

ENABLING OBJECTIVE:

6.4.1 Without the aid of notes, the student will MATCH six types of valves to a correct statement that defines an application for each. 100% accuracy is required.

CRITERION TEST: PROGRESS CHECK 8-702-0011T5

HOMEWORK: Read Chapter 9 of Plumbing Procedures

(SAMPLE ONLY)

UTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO and EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson overview	State and Display on Chalkboard/VAP	
a. Lesson Topic; TYPES OF VALVES		
b. Major Teaching Points:		
(1) Types of Valves and Their Application		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
II. PRESENTATION		
A. Types of valves and their application.	Position overhd. proj. Put up transparency 6.4.1XP	
1. Globe Valve		
a. Considered a throttle valve.		
(1) Used partly open		
(2) Used fully open		
(3) or used closed		
b. Used widely throughout engineering plants for a variety of services.	Give examples	
2. Gate Valve	Put up transparency 6.4.2XP	
a. Used where full flow or straight line flow is desired.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. This type of valve is NOT a throttle valve and should not be used in the partly open position.	Explain why?	
c. Gate valves are often used for fresh water systems.		
3. Needle Valve	Show transparency	
a. Used for making relatively fine adjustments in amount of fluid flow through an opening.	6.4.3XP	
b. Valve is considered a throttle valve which allows precise control of fluid flow.		
c. Uses vary from controlling fuel flow, refrigerant flow, to controlling oil flow to bearings.		

1.8.1.11

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
4. Check Valve	Put up transparency 6.4.4XP	
a. Used where flow in one direction is desired.		
b. The suction and discharge lines of feed pumps, feedwater lines to a boiler, and air valves on automobile tires are examples of their application.		
c. Generally check valves are used throughout the engineering plant.		
5. Steam Regulator	Put up transparency 6.4.5XP	
a. Used for steam driven rotary and centrifugal pumps.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Used to control pump speed or reduce steam pressure.		
6. Hydraulic Flow Control Valve	Put up transparency 6.4.6XP	
a. Regulates flow of oil in hydraulic systems.		
b. Found on steering systems and elevators to control speed of rams or cylinders.	Secure overhd. proj.	
III. SUMMARY		
A. State the Lesson Objectives	Turn to cover page and read the lesson objectives	
B. Teaching Points	Briefly summarize teaching point	
1. Types of valves and their applications.		
IV. APPLICATION - None		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
V. EVALUATION		
A. Check for Understanding. List five questions and answers.	Ask thought-provoking questions to check student understanding of the lesson topic	
B. Complete Progress Check Z-702-0011T5		
VI. ASSIGNMENT		
A. Read Chapter 9 of Plumbing Procedures		

INFORMATION SHEET 1.9.1I August 1979

TITLE: LESSON TOPIC GUIDE ELEMENTS/FORMAT

INTRODUCTION:

The purpose of this information sheet is to provide you information on the purpose, usage, elements, and format of the lesson topic guide. Contained within this information sheet is a sample lesson topic guide.

REFERENCE:

NAVEDTRA 110, Procedures for Instructional Systems Development

INFORMATION:

A. Definition of a Lesson Topic Guide (LTG)

    1. An organized outline of a single lesson topic taken from the curriculum outline and serving as a blue print of what is to be accomplished in class. It is complete in detail and lists:

        a. the objectives

        b. main teaching points

        c. references

        d. training aids

        e. methods

        f. procedures

        g. the supplemental information as needed

B. Definition of an Instructor Guide

    1. A series of lesson topic guides grouped in units or by phases which collectively outline the teaching/learning activities to be accomplished during the course.

    2. Also includes Front Matter: Cover Page, Foreword Page, Table of Contents, Safety Notice and "How to Use The Instructor Guide".

C. Purposes

    1. Provides administrative control

        a. Standardizes subject matter presentation

        b. Aids in planning the sequence of subject matter

c. Avoids duplication of subject matter

2. Guide for the Instructor

a. Ensures coverage of the subject matter

b. Lists available instructional materials and instructional aids that the instructor can use

c. Provides information on the complete identification of references for use within the lesson

d. Acts as a timetable

e. Lists criterion test and homework assignments

D. Elements/Format

1. Lesson topic guide cover page format - a two column page containing information that will assist the instructor in preparing for the conduct of instruction

a. Heading: contains the document title of "LESSON TOPIC GUIDE" and the name of the training activity that developed the LTG.

b. Course title: the complete official course title as given in the curriculum outline. Include the CANTRAC Number. While in I.B.C, use (A-012-0011).

c. Lesson Topic: This will correspond to the number and title specified in the curriculum outline.

(1) Number assigned by unit and lesson topic within the unit.

Example: 1.2 ←

Lesson topic

Unit

d. Classification: This designates the security classification of the material presented in the individual lesson, even though the instructor guide itself may not contain classified information. If not classified, insert "For Official Use Only."

e. Allotted Lesson Time: The time allotted for completion of the individual lesson will be entered here in instructional periods for classroom and practical application (the same as contained in the corresponding curriculum outline lesson topic page).

f. Instructional Materials: Instructional materials which the instructor/student may use for preparation or during instruction will be listed. Consist of four sub-categories; Instructional References, Instructional Aids, Texts and Instruction Sheets. Each subcategory heading should be underlined.

(1) Instructional References: All source material from which the instructor is to gather information to support the learning objectives. List the military publication first, in order of seniority, underline titles of publications, then list the civilian publication. Listed by a military identification number/civilian author, title, chapter and page/paragraph nmber if appropriate.

(2) Instructional Aids: All equipment and audiovisual aids necessary to conduct the lesson. These should be grouped and headed by sub-category titles such as training equipment, transparencies, flock cards, film/film guide sheet, video tape, etc.

(3) Texts: All reference material provided for student use such as the Student Guide or a required reading textbook or instruction.

(4) Instruction Sheets: A generic term for information sheets, job sheets, job plans, assignment sheets, note-taking sheets, etc. Designed for student use.

g. Date: The date the lesson topic was prepared.

h. Terminal Objective: Transferred from the course curriculum outline. While in the Instructor Step Course use the behavior, condition and standard from the LOAW and write a terminal objective.

i. Enabling Objective: Transferred from the course curriculum outline. While in the Instructor Step Course use the behavior, condition and standard from the LOAW and write an enabling objective.

j. Criterion Test: A list of written and/or performance tests against which subject comprehension will be judged. The test will be identified by course title and number if applicable. DO NOT write the test items in this space.

k. Homework: Written assignments, such as student activity guides, to be completed by the student.

2. Lesson Topic Guide Page Format - the main body of each LTG will follow the three-column format of OUTLINE OF INSTRUCTION, INSTRUCTOR ACTIVITY, and STUDENT ACTIVITY. This format enables the instructor to view all instructional factors at a glance. The entries in each column will be of sufficient detail to guide the new instructor in the conduct of the lesson.

a. Outline of Instruction Column

(1) Entries in this column will cover the planned lesson discussion content.

(2) Outline will be developed in sufficient detail so that it can be used as the instructor's primary teaching document. No further guide or lesson plan will be necessary.

(3) Major points to be covered during lesson topic are listed in full textbook narrative form, descriptive phrases, or key words as appropriate

(a) Facts

(b) Concepts

(c) Procedures

(d) Rules

(e) Principles

(4) In the interest of economy, the outline of instruction may extend across the entire page whenever no entry is required in either the instructor activity or student activity columns.

(5) When prepared for printing, ample space should be provided throughout for instructor annotations.

NOTE: The following introduction format items will be demonstrated during the 5-minute introduction to a lesson.

(6) Introduction - this step will be developed to promote student interest, to motivate each student with a desire to gain an understanding of the lesson topic, and to enable each student to recognize enabling objectives and their relationship to the terminal objective. The following will be accomplished:

- (a) Establish contact
- (b) State Lesson Objectives
  - 1. Students should be provided a copy of the lesson objectives or allowed time to copy them from chalkboard/VAP.
- (c) Establish Readiness
  - 1. Motivating statements
    - a. Statements to promote student interest in learning materials contained in the lesson topic.
  - 2. Lesson Overview
    - a. Topic: List
    - b. Major Teaching Points: List

(7) Presentation - All lesson material will be covered in this step. The main or key points of the step shall correlate with the enabling objectives. These points will be presented in sufficient detail to ensure thorough and complete coverage of all learning objectives. Additionally, the instructor activity column may show diagrams, text materials, audiovisual aids, and other materials supporting the

instruction. Each of these materials should be identified adjacent to the point it supports in the outline each time its use is planned.

(8) Summary - consists of two parts.

(a) Statement of the learning objectives.

1. Turn to cover page and read objectives.

(b) Major Teaching Points - List all major teaching points.

1. Give brief summary of each.

(9) Application - This step will be presented in a manner to cause the student to apply the lesson information to solve one or more realistic problems. This may require either mental or physical student activity; however, every effort should be made to provide for physical activity. Job sheets will be used in the fulfillment of this step.

(a) Applies to physical and mental skill lesson only.

(10) Evaluation - To check student progress and determine the extent to which the student has accomplished the learning objectives. This step will consist of either a list of thought-provoking questions with answers covering the instructor guide objectives and instructions to administer a progress test with a listing of the test number as identified on the cover sheet.

(11) Assignment - This step will provide the assignment objective and motivate the student by emphasizing key points in the subject matter; aid the student in developing sound study methods; and provide good, sound reasons for accomplishing the assignment.

b. Instructor Activity Column - this column provides guidance to the instructor on teaching the subject matter in the outline of instruction column.

(1) Course developer enters in this column the teaching and learning activities or behaviors which enhance and encourage productive learning on the part of the student.

(2) Course developer will also provide guidance to the instructor on maintaining student interest and participation, measuring student comprehension and planning summaries at strategic points in the lesson.

(3) The instructor may also list materials, references and enabling objectives, but such entries are not to be construed as meeting the requirements for entering teaching-learning activities herein.

c. Student Activity Column - Describes all planned active participation of the students during the learning process. Such desired activities shall include, but not be limited by, the following:

Critically analyzing
Observing
Taking notes
Formulating ideas or concepts
Grasping knowledge
Asking questions
Studying
Drawing
Tracing
Visualizing steps
Measuring
Designing
Describing
Identifying
Recalling
Outlining
Answering thought-provoking questions
Troubleshooting (theoretical or practical)
Correlating theories, elements, ideas, or processes
Integrating concepts, theories, elements, ideas, ideals, or processes
Relating concepts, theories, or ideas

d. Page Numbering

(1) Lesson Topic Guides shall be numbered with the unit, lesson topic and the page as shown in example below.

(a) 1.10.5 - the one is the unit number, ten is the lesson topic number and five is the fifth page of the topic ten.

INFORMATION SHEET 1.10.1I

August 1979

TITLE: LESSON TOPIC GUIDE ANNOTATION

INTRODUCTION:

In order to present an effective lesson, the instructor must annotate his/her Lesson Topic Guide. The annotation will serve as a guide to the instructor in teaching the subject matter. This information sheet contains the procedures and other information that will enable you to annotate your Lesson Topic Guide.

REFERENCES:

1. NAVEDTRA 110, Procedures For Instructional Systems Development.

INFORMATION:

A. Purpose - To provide guidance to the instructor on teaching the subject matter in the Outline of Instruction column.

B. Format/Elements

1. Instructor Activity Column

   a. Enter in the Instructor Activity column teaching/learning activities or behaviors that enhance and encourage productive learning on the part of the student.

   b. Provides a space for the instructor to insert triggering information such as "pass out work sheets", define or explain certain terms in the outline, timely use of training aids, questions, sea stories, etc.

   c. Certain items may appear in this column as part of the standard format.

2. Student Activity Column

   a. Enter in the Student Activity column planned student activities which directly contribute to student achievement of the learning objectives.

   b. Enter only activities particular to the specific lesson topic.

c. Certain items may appear in this column as part of the standard format.

3. Record ALL annotations adjacent to the point in the Outline of Instruction it supports in the Instructor and/or the Student Activity column.

4. When preparing the Lesson Topic Guide, provide ample space throughout for annotation, i.e. Introduction section, etc.

C. Annotation Procedures

1. Develop the Introduction.

   a. Determine and record a means of gaining student interest consistent with effective learning principles on the lesson topic being taught.

   b. Determine and record a means of establishing student effect for the lesson.

      (1) How will the student use the lesson material?
      (2) Why does the student need to know the lesson material?
      (3) Class must be motivated before meaningful learning can take place.

   c. Standard Items

      (1) State Lesson Objectives - turn to cover page of Lesson Topic Guide and read objectives.

      (2) Lesson Overview - State and display on chalkboard/VAP.

2. Develop the Presentation.

   a. Determine and record examples and additional information to aid student understanding and to stimulate thought.

   b. Develop and list questions to be asked during the lesson to assess student understanding and to stimulate thought.

   c. Key LTG's for the use of training aids, instructional materials and points of emphasis.

(1) Points of emphasis may be keyed by the use of high-lighter pens.

3. Develop the summary.

   a. Record information necessary to summarize the major teaching points.

   b. Standard Items

      (1) State Lesson Objectives - turn to cover page of Lesson Topic Guide and read objectives.

      (2) Review Major Teaching Points, summarize Major Teaching Points.

4. Develop the Application.

   a. Record, as required, information that will assist the student in learning to perform the skill being taught.

5. Develop the Evaluation.

   a. Develop and list questions to check student understanding of the major teaching points.

   b. Record information on the upcoming test.

6. Develop the Assignment.

   a. Record information necessary to inform students of outside work.

   b. Emphasize key points in the assignment.

INFORMATION SHEET 1.11.1I August 1979

TITLE: THE EFFECTIVE INSTRUCTOR

INTRODUCTION:

Training is conducted to prepare personnel for successful job performance upon assignment to billets in the operating forces. The prime responsibility of the Instructor is to ensure that course graduates can perform successfully the jobs for which the training is provided in these courses.

REFERENCES:

1. NAVPERS 16103-C, Manual for Navy Instructor
2. NAVPERS 92050, Instructor Training
3. NAVTRA 10058-B, Human Behavior & Leadership
4. AF MANUAL 50-62, Principles & Techniques of Instruction
5. STATON, T. F., How to Instruct Successfully
6. MAGER, R. G., Developing Attitude toward Learning

INFORMATION:

The role of the Instructor is to be a capable platform teacher. To do this, he has to learn platform methods, how to write lesson objectives, how to outline and to write topic guides, to be able to design and often make his own training aids and to motivate students by his own example. The instructor, alone, is responsible for what is taught in his class. The amount of learning that takes place is directly related to both how well the lesson is prepared and the teaching skill of the instructor.

An instructor is primarily in the communication business. He must be able to communicate with all students.

Webster's Dictionary defines communication as an act or instance of transmitting. However, effective communication is more than transmitting a message. Effective communication occurs when the receiver accurately understands the message.

At its basic level, communication is achieved through the use of simple oral and visual codes. You must select your words carefully to convey accurately messages which your listeners understand.

Facial expressions, hand gestures, and body motions form other communication signals. These non-verbal communication signals often convey more information than the verbal codes. With these non-verbal signals we consciously or unconsciously reveal our emotions, feelings and attitudes.

The effective communicator always remembers a basic rule: communication succeeds only in relation to the reaction of the receiver. Communication takes place when the listener reacts with understanding and changes his behavior accordingly. You can determine if your listener accurately understands your message from the information he relays back to you. You learn much about your communications by observing the reactions of your receivers. Your challenge is to be sufficiently perceptive to detect this feedback. You can then ask yourself: "Am I accurately sending my intended message"? If not, how can I adjust my transmission to obtain the desired results?

Some language experts suggest the following proportions of signals in a message: words alone, 7 percent; tone of voice and inflection, 38 percent; facial expressions, posture, and body gestures, 55 percent. These verbal and non-verbal signals make up the message.

Feelings and attitudes are integral parts of the messages we send. Yet we may concentrate on the message's verbal transmission and neglect the non-verbal signals. If we stop and think about the non-verbal contents, we realize that our inner feels and attitudes give an extra dimension to our communications. The feelings of friendliness, liking, sadness, or anger give life and meaning to words.

The feelings and emotions you send help project your intent. They provide clues to the receiver about your attitudes toward him. Clear, concrete words forcefully expressed may leave no doubt in the receiver's mind about your intent but if your words are ambiguous, he often must rely on the non-verbal signals to grasp your true meaning.

Communications is a three-part process composed of a source, symbols, and a receiver. The instructor is the sender; his lesson, the symbols; and the student is the receiver. There are many communication skills the instructor can use to ensure the kinds of feedback that accomodate the specific learning needs of the student.

As a Navy Instructor, your students will be influenced by your example. Students learn not only observable behavioral objectives but also suggested affective or attitudinal objectives by your model.

You will develop as an instructor, using the methods that made you proficient in your field of work. Growth through practice, reading, research, and keeping up with new developments is important to this effort. Becoming an instructor will add scope to an already acquired skill. Another attitude you must acquire is to accept change. If you are a new instructor trainee, this may be easy. It may be more difficult for those with established patterns for instruction.

Whenever change is taking place in a field of endeavor, there are many who resist the change and stick with the "tried and true" they have known and been comfortable with in the past. Rapid changes in Training and Education have become necessary due to changes in other disciplines and technologies. Computers have compacted the time required to accumulate and process data. This has accelerated knowledge and change in technology. Rising cost have also brought about innovative changes. Turn around time, in training, is another factor.

The Navy is constantly making updates in ships and equipments. This means changes in training personnel in order to man and to maintain these new systems. It should not be difficult to understand the need for broadening the training of Platform Instructors to encompass the many areas of instructional technology.

As an Instructor, it will be your responsibility to establish good relationships with the students. In establishing these relations, the more you know about the individual, his problems, and his potential goals the better you will be prepared to guide his behavioral development. General theories, laws of learning, human factors, motivation, and environmental influences all make up parts of an instructor's portfolio to identify and solve student learning problems. A working knowledge of these elements will allow the instructor to emphasize with the learner. Once the students basic human needs have been satisfied and a proper environment has been secured the student with adequate motivation, is ready to learn. It is not being asked that a learner be mollycoddled into learning, but rather that the student be looked upon as a human being with certain inherent rights and feelings.

THE EFFECTIVE INSTRUCTOR SETS AN EXAMPLE:

Instructors should be professional in all aspects of their work. They have to be aware of their influence on students and set an example at all times. The instructor must set rules early in the course and maintain them. Avoid arguments, control distractions, be fair in all your dealings with students - above all be consistent.

Instructors should be intellectually honest at all times in order to maintain credibility in the eyes of the student. They must maintain a neat, clean, proper personal appearance. Always be courteous by using proper titles when addressing military or civilian students and last but not least welcome and profit from any evaluation that may come from the students or other instructors.

INFORMATION SHEET 1.12.1I August 1979

TITLE: STUDENT MOTIVATION

INTRODUCTION:

As we recall, learning is changing. Then it follows that teaching is assisting students in making some desired change.

It is generally agreed that it is human nature to resist change, yet we observe individuals continually making changes in their life style, environment, etc. This leads us to conlude that we tend to resist changes that are forced upon us and we welcome the opportunity to make the changes we want to make.

In a classroom situation, we as instructors must realize that before meaningful learning is to take place we must whet the mental appetite of the students creating within them the desire to learn. This act is student motivation and without it little or no learning will take place.

REFERENCES:

1. Hersey and Blanchard, Management of Organizational Behavior, 2nd Edition.
2. Dembo, Myron H., Teaching For Learnning.
3. Klausmeier, Herbert J., Learning and Human Abilities, 4th Edition.

INFORMATION:

A. Definition of motivation

    1. That force within an individual that prompts him to an action.

        a. A mental force within an individual that creates within the trainee that desire to learn.

        b. A feeling of dissatisfaction about the distance between where one is and where one would like to be.

        c. Motivation is a term meaning: a need results in a motive that develops into a drive, which results in an action.

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B. Categories of Motivation

1. Extrinsic

a. This is an outside force working on an individual. This force has no direct relationship to the material to be learned. An example of extrinsic motivation would be a student that learns all lessons very well in order to be honorman in his class. Note: This student was not motivated for the subject matter but was motivated to become honorman.

2. Intrinsic

a. Not dependent on any external circumstances. This is the case when one is anxious to learn for the sake of knowning. The satisfaction one derives from knowing is the only reward one is seeking. This individual remembers the material better because of the genuine interst or motivation one has for the material being studied.

C. Types of Motivation

1. Inherent

a. This is the type of motivation an individual has prior to entering class. It is a continuing process of growth. It is the basis for developing new interest attitudes or habits of conduct. It results from one's awareness of physical or emotional needs.

2. Acquired

a. This is the motivation one derives from a stimulation originating outside one's self. The instructor must make the student aware of why they need to learn each lesson. Each Lesson Topic Guide calls for "Establish Readiness", it is at this point, notice, this is given before we get to the presentation of the lesson. As instructors, we know that students learn only when they are ready to learn, and if class is not ready, little learning can take place.

D. Principles of motivation

1. Experiencing high stress and anxiety is associated with low performance, erratic conduct and personality disorders.

2. Expecting to receive a reward for specified behavior or achievement directs and sustains attention and effort toward manifesting that behavior or achievement.

3. Non-reinforcement after a response tends to extinguish the response.

4. Expecting to receive punishment for manifesting undesirable behavior may lead to suppression of the behavior, avoidance or dislike of the situation, or avoidance and dislike for the punisher.

5. Acquiring information concerning behavior and correcting errors are associated with better performance, and more favorable attitudes toward the learning task.

6. Setting and attaining goals require learning tasks at an appropriate difficulty level.

7. Success on current learning tasks heighten motivation for subsequent tasks; feelings of failure lower motivation for subsequent tasks.

E. Motivational Techniques

1. Relate a personal experience that ties into lesson.

2. Tell a humorous story that leads into lesson.

   a. This can be real or imagined.

   b. Story should not detract from instructors prestige, nor be demeaning.

3. Emphasize need to know of subject matter.

4. Be enthusiastic toward class, and lesson topic.

5. Be friendly and sincere and show an interest in class.

6. Emphasize encouragement.

a. Suggest lesson will, with reasonable effort, be rewarding, and within the ability of all to accomplish.

7. Assign questions to students in keeping with their ability to answer correctly.

8. Give recognition (reward) whenever possible, insuring it is deserved.

9. Stimulate friendly competition. Ensure it remains friendly. Emphasize performance.

10. Utilize curiosity and encourage its growth.

11. Capitalize on existing interests and develop others.

12. Arrange learning tasks appropriate to the ability of the students.

13. Provide for realistic goal setting.

    a. Intermediate.

    b. Long Range.

14. Assist students in evaluating their progress toward their goals.

15. Reduce tension.

16. Never emphasize the difficulty of a lesson. Avoid being negative.

17. Conclusions

    a. Achievement motivated students.

        (1) They work hard for success.

        (2) Worry little about failure.

        (3) Accept goals of intermediate difficulty.

        (4) Work harder than students motivated to avoid failure.

    b. Students motivated to avoid failure.

        (1) Worry more about failure than succeeding.

        (2) Avoid goals of intermediate difficulty.

(3) Accept very easy or very difficult goals.

(a) Very easy goals can be accomplished.

(b) Very difficult goals resulting in failure can be rationalized away.

C. Maslow's need priority

Abraham Maslow, a behavioral (Humanist) psychologist, taught at Brandeis University, Waltham, Mass. He died in 1970. Maslow pointed out that people are moved to action because of a set of needs that they strive to satisfy. The drive to satisfy these needs exist in a priority. The more basic the need, the more important it is and provides the strongest motivation. However, when the need is satisfied it no longer provides motivation, the next higher need usually takes over as the motivator. These needs can best be illustrated as a pyramid, placing the most basic need on the bottom.

1. Survival need

a. Air, food, water and shelter.

b. Students must see that it is possible to:

(1) Pay rent, buy groceries, buy clothing, receive medical care.

(a) Normally no problem for military.

(b) However, if the student does not think his need is supplied, he may be motivated for things not desired in a classroom.

2. Security need

a. Freedom from harm.

b. Military protects from grosser forms of violence, disease, famine, poverty.

c. When security is threatened, panic may result.

(1) Fear-going AWOL.

(2) Fear of training.

(3) Fear of environmental factors.

3. Social needs

   a. Need to give and receive affection on an individual basis.

   b. Need for a stable relationship with a particular group.

   c. One of strongest needs at a new command. Looking for acceptance.

   d. May be more concerned about finding friendship than school activities.

   e. Social group may be wrong crowd.

   f. Family may cause social problems.

4. Self-esteem need

   a. Requires recognition of talents, and abilities.

   b. Urge to be in charge.

   c. Need may be fulfilled by being top student.

   d. Usually self-respect must be maintained.

      (1) Avoid humilation or being viewed unfavorable by other students.

5. Self-Fulfillment (Growth) need

   a. Need to excel and do more.

   b. Need to respond to challenge.

   c. Need to work at a level commensurate with one's capabilities.

   d. Need to experience pride in one's accomplishment.

   e. Need is within, not limited to high intelligence or great ambition, but for average, and low intelligence also.

Inability to fulfill a lower-order need or difficulty in fulfilling this need may result in stress and immature behavior.

Survival and security needs are largely dependent upon external factors. Social and status needs are dependent upon a combination of external factors and intra-personal relations with people.

Self-fulfillment need is largely based on the need to respond to challenge, to feel confident to produce a meaningful product.

The generation gap is quite evident. It occurs due to the fact that most young people have never had survival or security level needs threatened. They are normally at higher level needs. The adult often feels the survival and security level needs and attempts to communicate at these levels. The young person does not understand because he had never experienced these needs. The generation gap is nothing more than adults and young people attempting to communicate while motivated by different need levels.

INFORMATION SHEET 1.13.1I August 1979

TITLE: ORAL QUESTIONS AND QUESTIONING TECHNIQUES

INTRODUCTION:

The importance of questioning in any teaching situation cannot be overstressed. Often times, the difference between a dull, boring lecture and a lively discussion, in which much learning takes place, can be only a matter of some well planned, well directed oral questions. The ability to direct thought through questioning is recognized as one of the most valid proofs of teaching skill. From observation, it is apparent that a direct relationship exists between the success of an instructor and the quality and quantity of oral questions he uses in his teaching procedures. Therefore, the information that follows will be of invaluable use to you, the instructor, with regards to the elements of using oral questions in your classroom.

REFERENCES:

1. NAVPERS 92050A, Instructor Training, Excerpts from Naval Training Bulletin, Part 4.
2. Borg, Walter R., Marjorie L. Kelley and Phillip Langer E, Effecitve Questioning, Teachers Handbook.
3. Patterson, Charlotte J., "Teaching Children To Listen," Todays Education, April - May, 1978, pp. 52-53.
4. Klausmeir, Herbert J., Goodwin, William, Learning and Human Abilities, Fourth edition.

INFORMATION:

A. Purposes of Oral Questions:

1. To stimulate student thought - In order to accomplish this, it is apparent that the questions should call for the application of facts rather than just facts alone. Facts can easily be committed to memory and require little or no thought on the part of the student.
2. To establish a level of instruction - To meet this purpose, the question should require students to comment on previous experience in the subject matter you are going to teach. Also, a series of oral questions asked on that subject matter is the quickest and easiest means to determine student achievement in that particular subject matter, enabling the instructor to determine whether majority of class is ready for instruction.
3. To arouse interest - The asking of a general question such as "How many of you have fired a .50 claiber machine gun?" or "How many persons died on the highways in 19__?" Will serve to clear the students' minds of any extraneous thoughts and aids in motivating students as they mentally search for an answer. This purpose is used generally to generate interest in.a large block of subject matter, usually a lesson as a whole.
4. To focus attention - By asking a question on some particular part of a model, mock-up, chart, demon-

stration piece, or chalkboard drawing, student attention can be directed to that immediate area.

5. To review subject matter - Questions requiring student to solve problems can be devised that will provide the student with an opportunity to apply knowledge. Again, emphasis should be placed on the ability to reason and not on the recalling of mere facts.

6. To drill on subject matter - To enable precise recall of facts, figures, shapes, formulas, etc., pre-planned oral questions can be used to reinforce that subject matter in the students minds. This technique will eventually lead to the student becoming conditioned to subject mastery being drilled on.

7. To check comprehension - Questions covering the main points of the lesson are invaluable to detect and correct errors in thinking and to locate areas where reteaching is necessary.

8. Increase student participation - Students will be more involved in the classroom if they both answer and ask questions.

9. Increase student learning - Asking questions is a good way for students to learn because students remember longer information obtained in answer to their own questions.

10. Develop communication skills - Students have the opportunity to improve their speaking skills as they

ask and answer questions. In addition, students increase their listening skills since they are actively involved in the class discussion. Helps students to organize thoughts.

B. Characteristics of Good Oral Questions

1. Must be relevant to the subject matter and limited to only one thought.

2. Must be brief and start with an interrogatory word or phrase.

   Examples of interrogatory words:

   HOW, WHO, WHAT, WHERE or WHEN

   HOW can a Navy instructor radiate enthusiams?

3. Must use terms that the trainees understand based on the average student.

   Examples:

   (Poor) Which is the most important learning sense, the olfactory sense or the gustatory sense?

   (Good) Which is the most important learning sense, the smell sense or the taste sense?

4. Must be phrased in such a way that it gives the desired meaning.

   Examples:

   (Poor) Where does the OOD stand his watch?

   (Good) Where does the OOD stand his watch underway?

C. Types of Oral Questions

1. Questions are categorized as to type by virtue of the manner in which they are directed, by certain peculiarities they possess and by the intent of the individual instructor. A consideration of the identifying phrases will provide the instructor with keener insight as to where, when, and how they can be most effectively used. From their description, it is obvious that some of these questions should be frequently used and some only occasionally.

   a. OVERHEAD (BLANKET) - aids in determing subject matter familiarity. Directed to the entire class.

   b. YES - NO - call for a yes or no answer and should be followed up with why to decrease possibility of guessing.

   c. REVERSE - answering a question with a question and results in student answering his/her own question.

   d. REDIRECTED - instructor directs a question asked of him by a student to another student. Never use this type question unless you are sure of the correct answer.

   e. MULTIPLE ANSWER - a question that has more than one correct answer.

f. DIRECT - directed specifically to an individual student by method of the FIVE STEP TECHNIQUE.

Place for Question in a Lesson Presentation:

1. Questions can be effecively used throughout the entire lesson. Some of the purposes they serve in specific parts of the lesson plan are listed below.
    a. In the Introduction
        To focus attention
        To arouse interest
        To establish level
        To review subject matter
    b. In the Presentation
        To stimulate thought
        To arouse interest
        To focus attention
        To review subject matter
    c. In the Review and Exercise
        To review subject matter
        To check comprehension
        To drill on subject matter
    d. In the Test
        To stimulate thought
        To review subject matter
        To check comprehension
        To arouse interest

e. In the Assignment

To arouse interest

To focus attention

To stimulate thought

D. Questioning Techniques

1. FIVE STEP QUESTIONING PROCEDURE - It requires much discipline for an alert instructor to remain silent while a slow thinking, or even a quick student figures out an answer. Too brief a pause between stating the question and calling on a student at random defeats the purpose of the entire procedure. Proper procedure follows:

a. ASK THE QUESTION - to the entire class.

b. PAUSE - to give class time to think of the correct answer.

c. CALL ON STUDENT BY NAME - Any student may be called upon. Using student's names fulfills the basic human need of recognition.

d. ACKNOWLEDGE STUDENT RESPONSE - If answer is correct, praise the student, thereby motivating him to future efforts. If answer is incorrect, tactfully tell student that it is incorrect. Care must be taken so as not to demotivate student.

e. REPEATING OR REPHRASING STUDENT ANSWER - Leaves no doubt as to the correct answers and dispels class confusion. Should NOT be habitually practiced.

2. Handling Incorrect Student responses - when a student is incorrect, you must correct him/her. Emphasis should be placed on criticizing the response, NOT THE STUDENT. If possible, provide the student with another opportunity to answer the question.
3. Calling on non-volunteers - After asking a question, the instructor should frequently assign the question to a student who does not have his/her hand up. In using this technique the instructor should ALSO assign questions to volunteers.
4. Prompting - A series of hints, usually in the form of questions, used by the instructor to help a student who has given a weak, incorrect or an "I don't know" answer to an instructors question. The student is helped to arrive at the correct answer to an instructor's question by a systematic step-by-step questioning procedure by the instructor. Do not allow this technique to result in badgering the student.
5. Seeking further clarification - Used when a student gives a response to an instructor's question that is poorly organized, lacking in detail or incomplete. The instructor does NOT provide the student with any hints (prompts), clues or additional information, but ask the student to do so.

6. Refocusing - Used when the instructor wants the student to relate a correct answer to another topic.

7. Techniques the instructor should NOT use
   a. Habitually repeating one's own questions - Refers to the habit of an instructor mechanically repeating a question before assigning the question to a student.
   b. An instructor should NOT mechanically answer his/her own questions. After the instructor asks the class a question, he/she should assign the question to a student without answering it himself/herself.

8. General Questioning Techniques
   a. Maintain a friendly, natural, and conversational attitude at all times, but especially when questioning individuals.
   b. Do not hesitate to say "I do not know" to a student's question - Students are alert to detect the instructor who attempts to bluff. Unknown questions can be made subject of class discussion or assigned to individuals or to small committees to report the answer at a later class.

unintelligible. They lead to confusion and provide the instructor with no opportunity to check for understanding. The group response can be avoided by proper indoctrination or by ignoring the response and calling on an individual for the answer.

d. Have soft-spoken student repeat response loud enough for all to hear - the class should be made to understand that questioning is for the benefit of all and should not be confined to the instructor and the man called upon.

e. Fit the question to the knowledge of the student - it is difficult for the instructor to realize that what is everyday knowledge to him might be completely unknown to the student. Generally, the timid souls and slow learners should be given the easier question; however, stereotyping students by excessive adherence to this principle should be avoided.

Some Key Words for Questioning Use

CLASSIFY - To group facts according to a common characteristic.

COMPARE - To detect resemblance and difference among facts.

CRITICIZE - Requires careful analysis.

DEFINE - To determine limits and/or meaning of a subject.

DESCRIBE - Select qualities that characterize a subject.

EXPLAIN - To clarify points that may not be clear.

ILLUSTRATE - Calls for examples.

INTERPRET - Gives the individual's meaning he has attached to the subject.

JUSTIFY- Demands a showing that a thing is reasonable.

REVIEW - Critical evaluation of points presented.

SUMMARIZING - Condensing conclusion to a concise statement.

INFORMATION SHEET 1.14.1I August 1979

TITLE: INSTRUCTIONAL MEDIA (CHALKBOARD/VISUAL AID PANEL)

INTRODUCTION:

It is extremely difficult to convey accurate and meaningful images by means of words alone; therefore, most instructors use training aids such as photographs, chalkboards/visual aid panels, charts, transparencies, slides, models, mock-ups, motion pictures, and other devices for the purpose of facilitating understanding by means of the visualization process. No one type of aid can very well be singled out and used to the exclusion of all others. Beyond question, however, the one aid which the instructor finds practically indispensable is the chalkboard/visual aid panel.

REFERENCES:

Weber and Costello Co., How to Use the Chalkboard, A guide for Instructors and Students (a pamphlet)

INFORMATION:

A. Why use CB/VAP.
    1. Indispensible and probably the most frequently used training aid.
    2. Use limited only by the imagination of the instructor.
    3. Convenient
        a. Available in most classrooms/labs/shops.
        b. At any time during a lesson, may be used to: display terms, definitions, examples, problems, drawings, diagrams; give ideas, visual representations, and answer student questions.

   c. May be used to display assignments, safety precautions and other important information.
   d. Students may also be assigned to work problems on the CB/VAP.
4. Adaptable
   a. Flexible nature allows adaptation to almost any instructional need.
   b. May be used to teach almost any knowledge or skill lesson.
   c. May be used in all sections of a lesson topic-Introduction, presentation, etc.
5. Active
   a. Introduces the element of activity into the lesson, which tends to accelerate the learning process.
   b. Permits development of ideas as the lesson progresses.
   c. Student has the feeling of having participated because he/she will have contributed ideas and information which went into the building of the CB/VAP presentation.
      (1) Information is displayed as the lesson is discussed.
      (2) Student attention is immediately focused on CB/VAP.
6. Economical
   a. Cost, stowage and upkeep are minor.

7. Disadvantages
    a. May lose contact with class.
        (1) Talk to CB/VAP
        (2) Spend excessive time writing on CB/VAP without re-establishing contact with class.
        (3) Multiple erasures often necessary.
8. Advantages
    a. Enables the instructor to attract and focus attention of trainees on the specific point(s) on the specific point(s) under consideration.
    b. Allows the instructor to adjust the speed of the presentation to the rate of student comprehension.
    c. Gives instructor certain control over notetaking.

B. Preparation/Planning
1. Principles
    a. CB/VAP presentation should develop one point at a time and from the simple to the complex.
        (1) Example:
            A drawing to illustrate the operation of the steam cycle would consist of a boiler, turbine, condenser, pumps and necessary steam lines. The instructor should draw one part at a time, teaching as he/she explains the cycle rather than displaying and discussing the entire cycle at one time.
    b. CB/VAP work should develop logically

(1) Sequence board work so that the relationship of each new item to the preceding items is readily apparent.

(2) Develop concepts, theories, procedures, diagrams and other information step-by-step and in the easiest possible order so that students will be able to understand the presentation.

c. When possible CB/VAP work should develop climactically.

(1) "Climactically"means that the CB/VAP work should be executed with proper timing to take full advantage of the "dramatic element" that is present in the classroom.

(2) Do not announce before hand what will be displayed on the CB/VAP.

(3) Having caught the attention of the class, the instructor will be able to hold it because the students will be "curious" to see what the instructor is about to display on the board.

(4) General rule: maintain interest by working from cause to effect.

2. Step one in planning to use CB/VAP is to determine the following:

a. What parts of the lesson are important enough to emphasize by putting on the board?

   b. What diagrams/drawings can be used to get the different points of the lesson across.
   c. How the CB/VAP may be used to help students take notes.
   d. How much time the board work will require.
      (1) If too time consuming, revise plan by selecting another media or by placing information on board before the class begins.
   e. How will the material look on the board?
   f. How long should the material be left displayed?

3. Step two involves planning the actual layout of the board work.
   a. Use the Instructor Activity Column of L.T.G. to record or to key the material to be displayed on the CB/VAP, i.e. definition, diagrams.
   b. Decide where on the board the material will be displayed.
   c. Special emphasis can be achieved by use of colored chalk/markers or underlining.
4. Step three requires the instructor to determine to what extent the students will participate in the CB/VAP work.
   a. May want students to come to the board for specific drill.
   b. Excellent way to drill students on specific subject matters, i.e. solve circuit problems.

5. Obtain necessary materials.
    a. Chalk/marker(s).
    b. Eraser - CB/VAP.
    c. Pointer - to illustrate/emphasize sections.
    d. Templates - various types and shapes may be used.
    e. Straightedge and compasses - if straight lines and perfect circles are required this equipment may be used. If drawings are not that vital, free hand drawing is recommended.
6. Practice the board work.
    a. Purposeful planning, preparation and practice as described throughout this information sheet will be reflected in the presentation of the lesson.
    b. Student learning is increased.
    c. Helps develop instructor confidence and assurance.
    d. Elimates wasted motions.

C. Techniques

1. Writing.
    a. Write in straight lines.
    b. Keep neat and legible.
        (1) Do not overcrowd.
        (2) Legible handwriting or simple type of lettering.
    c. Use correct spelling and grammer.
    d. Emphasize key points by underlining, using upper case letters, writing in bold characters or using colored chalk.

e. Talk a little, chalk a little.

2. Drawings

a. Complex or large drawings.

(1) Construct prior to class.

(a) Pin prick technique.

(b) Lead pencil.

(c) Projector - overhead or opaque projector.

(2) Keep entire drawing covered until needed.

(3) If possible, uncover sections one at a time for presentation.

b. Other drawings.

(1) "Chalk a little - talk a little.

(2) Draw a small section, pause to explain the section. Continue until drawing is complete.

c. Label the drawing as appropriate.

d. Use aids to assist in making drawings, i.e. compass, straight edge etc.

e. Use pointer to draw attention to sections of the drawing rather than using a finger.

3. Chalk

a. Hold correctly to prevent screeching.

b. Chipping end helps prevent screeching.

c. Hold chalk side ways for shading large areas.

d. Two sizes.

(1) Regular.

(2) Large "railroad" - used for "bold" writing.

e. Two colors used for all purpose board work.

(1) Yellow.

(2) White.

f. Store chalk when not in use to insure that it does not become a distractor.

4. Use colored chalk/markers

a. Light colors for writing and outlining.

b. Dark colors for shading.

c. Colored chalk does not erase easily and is messy, wet sponge helps.

(1) Some colors do not show up well on CB.

d. Colors can be used to differentiate between parts.

e. Gives a more vivid impression.

f. Cross-hatching also used to differentiate parts.

5. Erase Board

a. Keep clean.

b. Erase in up and down motion (chalkboard only). This puts chalk dust in the tray.

c. Always erase board completely to avoid distractions.

d. Stow eraser when not in use.

6. Pointer

a. Arm straight and used as an extension of the body.

b. Hand nearest to object to be pointed out should be used.

c. Do not allow arm to cross the body.

   d. Stow the pointer when not in use to insure it does not become a distractor.
   e. Use to draw attention to sections of a drawing.
7. Stand to one side to avoid obstructing student's view.
8. Avoid talking to board.
   a. Practice good eye contact.
9. Pause frequently to:
   a. Maintain student attention.
   b. Explain what you are doing.
   c. Check for student reactions.
   d. Check drawing from student's viewpoint.
10. Visual Aids Panel:

    The Visual Aids Panel (VAP) is an alternate for the chalkboard. It represents one of the latest developments in media support material. Due to the fact that chalk is not used the dust related to chalkboards is non-existent.

Two types of colored markers are used on the VAP in place of chalk. One is the water color marker and can be erased with a cloth and water. The other is called semi-permanent and requires a cleaner to remove the markings. The use of both can be employed effectively if some marks are to be erased and others are to stay. (i.e., filling out a form several times or showing changes on a graph. VAPS are also provided with magnetic strips, numbers, and letters for displays.) Magnetic strips can be attached to flock cards

INFORMATION SHEET 1.15.1I August 1979

TITLE: METHODS/TECHNIQUES OF INSTRUCTION (KNOWLEDGE)

INTRODUCTION:

There are numerous teaching methods each designed for a specific purpose to allow for maximum learning. It is important for you, the instructor, to realize that these many teaching methods do exist and select the method best suited to the immediate situation. Due to time constraints, while you are in the Instructor Training Course, the emphasis will be directed toward the Illustrated Lecture Method. All the other methods have a specific purpose and can be most effective if employed for the designed purpose.

REFERENCES:

1. NAVPERS 92050A, Instructor Training, Excerpts from Naval Training Bulletin, Part A.
2. AF Manual 50-62, Principles and Techniques of Instruction, Chaps. 18-21.
3. NAVPERS 16103C, Manual for Navy Instructors, Chap. 4.
4. Staton, R. F., How to Instruct Successfully, Chaps. 5.

INFORMATION:

A. Methods of Teaching

1. Lecture - a true lecture is a one way oral explanation by a speaker to an audience. A satirical definition is "the transfer of information from a teacher's notes to the students' notebooks without passing through the mind of either." Use of this method in navy technical training is discouraged.

   a. Most commonly used.

   b. Used to introduce new knowledge type subject matter.

   c. Means of imparting verbal information.

   d. Allows maximum use of space and material.

   e. Can save time if teaching to large groups.

   f. Primary disadvantage is lack of instructor and student interaction.

   g. Used frequently to supplement other methods of instruction.

2. Illustrated Lecture - a combination of two lecture method variations: the teaching lecture and the illustrated talk.

    a. Teaching lecture

        (1) Instructor uses oral questions.

        (2) Students ask and answer questions.

    b. Illustrated talk

        (1) Instructor uses training aids to develop lesson.

        (2) Most common variation for Navy instructors.

        (3) Increase of student understanding and retention.

            (a) Stimulates more physical senses.

        (4) Holds student interest.

        (5) Increases rate of learning.

    c. This combination provides a very effective method for teaching knowledge. While here in Instructor Training this combination will be used and referred to as the Illustrated Lecture Method. Delivery techniques will be provided later in the Information Sheet.

3. Discussion - the interchange of ideas by the students under the supervision of the instructor.

    a. Used for:

        (1) Stimulating students to think constructively.

        (2) Sharing student personal experiences.

        (3) Means of solving problems.

    b. Time required for discussion is usually unpredictable.

    c. Class size normally limited to 15 or less.

    d. Very conducive to positive attitude development.

    e. Techniques for discussion lessons.

(1) Discussion is initiated by the instructor.

(2) By asking leading questions the instructor stimulates and guides the student's thinking and requires them to develop the idea he desires them to learn.

(3) Conclusion must always be reached so the student will not be confused.

f. Examples include:

(1) Case studies.

(a) A report of a real situation that has occurred, describing what has happened, but leaving it to the training group to decide as to the nature of the problem, the significance and the probable solution.

(2) Problem solving.

(a) A method of thinking based on scientific procedures. The purpose is to train people to analyze problems systematically.

(3) Incident process.

(a) A method of learning, from actual cases that involved real people in real situations, how to arrive at decisions and solve problems.

(4) Seminar.

(a) A method of instruction featuring informality and discussion of information.

(5) Role playing.

(a) Method in which incidents based on real life situations are reenacted by class members playing roles and making decisions. These decisions are then discussed by the class and summed up by the instructor.

(6) Brainstorming.

(a) The technique of gathering and exchanging ideas among a group of people.

(7) Panel-forum.

(a) A group of people, usually four to ten in number, who have a special knowledge of the topic sit at a table in front of an audience and hold an orderly and logical conversation on the assigned topic.

B. Delivery Technique for the Illustrated Lecture Method.

1. Introduction.

a. Establish contact.

(1) If it is the first meeting with class, introduce yourself.

(2) Give only background on yourself that might be of interest.

(3) After the first meeting. a simple "good morning/afternoon" might be sufficient.

b. State the Lesson Objectives.

(1) State and display the TO and EO's.

(a) Turn to cover page of LTG and read to class.

(b) Tells the student what he/she is expected to learn.

(2) Must be placed on chalkboard/VAP, student handouts or contained in the Student Guide.

c. Establish Readiness.

(1) Motivating statements.

(a) Develop student interest in the lesson topic.

(b) How will the student use the lesson material?

(c) Why does the student need to know the lesson material?

(d) How will the material apply to future lesson or the student's work?

(e) Class must be motivated before meaningful learning can take place.

(f) Most students do not come to class in an automatic motivated state.

(2) Lesson Overview (stated and displayed).

(a) Lesson topic: list.

(b) Major teaching points.

1 List.

2. Presentation.
    - a. Introduce the first major teaching point.
    - b. Explain the teaching point.
    - c. Use chalkboard/VAP or other training aids appropriate to lesson topic.
    - d. Encourage students to ask questions.
    - e. Ask developmental questions.
        - (1) Five-step technique must be demonstrated.
    - f. Check for understanding by asking questions.
    - g. Be alert for student confusion.
    - h. Review and summarize the teaching points (draw conclusion).
    - i. Proceed to next teaching point and continue above process until all teaching points have been presented.

3. Summary
    - a. State the lesson objectives.
        - (1) This alerts the student to the behavior each one should now be able to perform.
    - b. Major teaching points
        - (1) State each teaching point with a brief summary for each.

4. Application - (None Skills only).

5. Evaluation
    - a. Check for understanding.
        - (1) Prepare a list of five thought-provoking questions to check student understanding of lesson topic.

(1) If students fail to answer questions correctly, reteach as necessary.

b. Progress check.

(1) Identify for the student any testing situation.

6. Assignment

a. Make the assignment for this lesson topic.

b. Make the assignment necessary to prepare student for the next lesson topic.

c. To avoid any misunderstanding this should be written on chalkboard/VAP.

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INFORMATION SHEET 1.16.1I August 1979

TITLE: FIVE-MINUTE PRESENTATIONS

INTRODUCTION: The purpose of this information sheet is to outline the requirements necessary for satisfactory performance of a five-minute practice introduction to a lesson topic.

REFERENCE: Instructor Training Course A-012-0011 Staff

INFORMATION:

A. Specific Requirements

1. Select a topic (DO NOT select a topic on sex, religion, politics or anything that could be dangerous to the human element. When in doubt obtain staff instructor approval first.)

2. Write a terminal objective that supports the topic.

3. Write a minimum of one enabling objective that supports the terminal objective.

NOTE: You may use the same learning objectives and topic that you plan to use for practive teaching lesson #1. In fact you are encouraged to do this, thus allowing a practice introduction to your first lesson.

B. Guidelines for Introducing a Lesson Topic.

1. Place the following on the chalkboard/VAP.

   a. Name and rate/rank

   b. Lesson Topic

   c. Terminal objective number

   d. Enabling objective number(s)

   e. Major teaching point(s)

2. Establish contact

   a. Greet the class and state your name and rate/rank. A simple "good morning" or "good afternoon" which ever is appropriate will suffice for the greeting.

3. State the lesson objectives

   a. Terminal and enabling objectives

   b. Use the chalkboard/VAP as necessary.

4. Establish readiness through motivating statements.

   a. Develop an interest in the lesson topic.

   b. How will the student use the lesson material?

   c. Why does the student need to know the lesson material?

   d. Class must be motivated before meaningful learning can take place.

   e. You will be allowed to use notes for this exercise.

5. Give a lesson overview.

   a. State the lesson topic.

   b. State the major teaching point(s).

INFORMATION SHEET 1.17.1I August 1979

TITLE: MEASURING INSTRUCTIONAL INTENT

INTRODUCTION:

An integral part of any instructional program is the testing or measurement aspect. Training is described in terms of Learning Objectives. The measurement of student achievement of each of the Learning Objectives is accomplished by administering tests that provide direct assessement of whether or not the student's performance of the described behavior, under the predetermined conditions, meets the standard (criterion) specified in the Learning Objectives. A Criterion Test references a student's achievement to the Learning Objective standard (criterion), rather than rating his performance against other students being tested. Criterion Testing provides a valid assessment of each student's ability to do what is specified by the Learning Objective, since it reveals the fact that the student can demonstrate the performance required, meeting the specified standard, or he cannot. This instruction sheet provides comparison criteria between criterion-referenced testing and norm-referenced testing. You may find either system being utilized in your future instructor assignment. All courses should employ criterion - referenced testing.

REFERNECES:

1. NAVPERS 16808B, Constructing and Using Achievement Test.
2. NAVEDTRA 106A, Interservice Procedures for Instructional Systems Development.
3. NAVEDTRA 110, Procedures for Instructional Systems Development.
4. Gronlund, Norman E., Constructing Achievement Test, 2nd Edition.

INFORMATION:

A. Purposes of Testing

   1. Aid in determining attainment of knowledge/skill competencies described by learning objectives. (Improve Learning)

   2. Aid in increasing student motivation.

      a. Provides short term goals.
      b. Clarifying the learning expected.
      c. Feedback concerning learning progress.

3. Aid in increasing student retention and transfer of learning.

   a. Testing tends to direct learning efforts toward objectives being measured.
   b. Provides reinforcing practice in comprehension of skills and knowledge attained.

4. Aid in increasing student self-understanding.

   a. Provide insight into things students can do well.
   b. Identifies misconceptions that need corrective action.
   c. Identifies degree of skill attained.
   d. Test should never be used as a threatening instrument. Always used to improve learning.

5. Aid in providing feeback on instructional effectiveness.

   a. Are the instructional objective realistic?
   b. Are the methods and materials of instruciton appropriate?
   c. Are learning experiences well organized?

B. Criterion-referenced vs Norm-referenced Testing

1. Definitions

   a. Criterion-referenced testing - test results expressed in terms of the learning task (specific knowledges and skills) that a student can or cannot perform.

      EXAMPLE: The student will LIST all parts of the microscope and DEMONSTRATE its proper use.

   b. Norm-referenced testing - test results based upon a normal distribution of scores accumulated over a period of time, and based upon a large number of students. Students compete for numerical grades and class standing.

      EXAMPLE: The student is third highest in a class of 35 students with a numerical grade of 85.

      NOTE: THe terms criterion-referenced and norm-referenced refer only to the method used in interpreting test results, therefore the same test could be applied to either interpretation. Normally though:

(1) Norm-referenced test are designed to provide a wide range of scores so reliable discrimination can be made among students. Eliminate the easy test items and favor the average difficulty test items.

(2) Criterion-referenced test are designed to measure directly learning that is relevant to learning objectives, whether or not they are easy for the student. Also, all criterion tests are diagnostic and prescriptive. Diagnostic - Identifies learner deficiencies by telling the student exactly which objectives were not achieved. Gives more information than "score was 80%." Prescriptive - Once trainee deficiencies are identified, a plan of action to overcome those deficiencies can be developed. This plan is called a "prescription."

2. Major similarities and differences

a. Both require learning objectives to be specified.

NRT: Objectives stated in general or specific terms.

CRT: Objectives tend to be highly specific and detailed.

b. Both use a variety of types of test items.

NRT: Multiple-choice highly favored.

CRT: Less dependence on multiple-choice.

c. Both require the application of common rules for test item construction.

NRT: Emphasis is on the ability of the test items to discriminate among students.

CRT: Emphasis is on the ability of the test item to describe a specific student performance.

d. Both are constructed to fit a particular use.

NRT: Used primarily for placement and post testing.

CRT: Used primarily in pretest, progress and diagnostic testing.

e. Both provide competition.

NRT: Between members of the class.

CRT: Between the student and the learning objectives.

C. Types of Tests

1. Pretest

   a. Administered to determine the appropriate placement of an individual in an instructional program.
   b. Used to determine how much of a course content the student already possesses.
   c. Should be developed and administered in all individualized courses and in any group-paced course that has provisions for acceleration.

2. Progress Test

   a. Administered at intervals during a course to assess instructional effectiveness and student learning.
   b. Critiques of the test will be conducted using the test as a teaching device. Use examples similar to those in the test to ensure student understanding.
   c. There must always be reinforcement so the student is not left in doubt as to the correctness of his/her learning.
   d. Written and performance tests both apply.

3. Post Test

   a. Administered after the completion of instruction to assess whether a student has mastered the learning objectives of the unit/course.
   b. Only difference from a pretest is the purpose for which the test is used.

4. Entry Level Test

   a. Administered prior to course enrollment to determine if the student possesses the necessary knowledge/skill prerequisites.
   b. Failure would suggest reassignment or some type of special training program is necessary.

D. Criterion Test Development

NOTE: New courses and all courses undergoing a revision must use criterion testing. In criterion testing an individual's performance is compared to external criteria which are derived from an analysis of what is required to do a particular task. The measurement for each test item is on an absolute GO/NO GO BASIS.

1. Review the learning objectives

    a. Must have well defined behavior, applicable conition(s) and standard.
    b. Revise as necessary.

2. Analyze learning objectives and specify constraints which necessitate changes in the L.O. condition and standard.

    a. Time availability.
    b. Degree of realism in training.
    c. Degree of realism in testing.

NOTE: It makes no sense to write LO's with job-related behaviors, conditions and standards and then give a multiple-choice type test. Test must realistically describe the behavior expected of the student.

3. Write test items to measure the students achievement of the LO's.

    a. A minimum of two test items should be written for each learning objective which does not require actual job performance.

    b. Test items must duplicate the behavior specified in the LO.

    c. Each test item should be numbered so it can be easily traced to the appropriate learning objective it measures. This provides necessary data to direct remediation.

4. Develop pass-fail performance criteria.

    a. Based on learning objective's standard.
    b. Ensure all the students perform the task in the same way and are graded on the same criteria.

INFORMATION SHEET 1.18.1I August 1979

TITLE: TEST ITEM CONSTRUCTION

INTRODUCTION:

Constructing a good test is one of the hardest jobs an instructor may have, and it is also one of the most important. The instructor must remember that developing a test for assigning grades is, at best, a secondary objective. The primary purpose of testing is to increase learning. Good tests are teaching devices in themselves.

The most important consideration in constructing tests is to measure student achievement of learning objectives. To write good test items, the instructor must understand the basic concepts involved. This information sheet provides guidelines which will help you develop good test items quickly and efficiently.

REFERENCES:

1. NAVEDTRA 110, Procedures for Instruction Systems Development, Phase II

INFORMATION:

A. Written Test Items

1. Completion

a. Description - A test item requiring the student to provide a response; by supplying a critical element that has been omitted from a statement.

b. Construction

(1) Use only one blank per sentence.

(2) Blank should appear at, or near end of sentence.

(3) Insure there is only one correct and undisputed response for each blank.

(4) Insure the missing item is important.

EXAMPLE: A pilot can determine compass heading by correcting for variation and ________.

BAD: A _____ is a _________ ________.

2. Multiple choice

   a. Description -

      (1) Consists of a question or incomplete statement (the item) followed by several possible answers.

      (2) Test item designed to measure a student's ability to interpret, discriminate, select, recall, recognize and make application of learned information.

      (3) May also be used to measure understanding, judgement and reasoning ability.

   b. Construction

      (1) Determine behavior in L.O. which item is to measure.

      (2) Devise a problem, question or incomplete statement requiring the student to perform the specified behavior.

      (3) Include as much information as possible in the stem.

      (4) Include in the item all conditions information, assumptions and details required to answer the question correctly.

      (5) Develop a minimum of four plausible choices.

      (6) Use the language of the students, and the job.

      (7) Use sketches and diagrams when needed.

      (8) Place correct answer in random position throughout test.

      (9) Insure correct answers do not follow a pattern that could be easily remembered.

      (10) List numerical choices in ascending order.

      (11) Do not use the articles "a" or "an" at the end of the item; this tends to indicate correct choice.

(12) When a negative response is desired make this clear to the student by underlining, capitalizing and/or italicizing the negative words (NO, NOT, POOREST, LEAST, ETC.)

(13) Do not use trick, or ambiguous questions.

(14) Do not test on unimportant details.

(15) Do not use choices such as "all of the above," "any of the above," or "none of the above."

(16) Insure there is only one correct response per item.

(17) All choices approximately same length.

3. Matching

a. Description -

(1) A type of test item used to measure a student's ability to identify, associate, and discriminate among things similar or related.

b. Construction

(1) All parts of a matching item should deal with a similar idea or topic.

(2) Each item should range from a minimum of five parts to a maximum of twelve.

(a) More than twelve is likely to lead to confusion.

(3) More choices should be listed in the answer column than there are questions in the question column.

(4) This item may consist of a labeled diagram and a list of responses.

(5) All parts of the matching item should be on the same page.

(a) To eliminate confusion.

(6) If an answer may be used more than once, state this in the instructions.

(7) Label columns

(8) Place the column containing the longer statements on the left side of the page.

(9) Leave space for students to record their responses at the left of this column.

4. Labeling

a. Description -

(1) Labeling test items are constructed by using drawings of items which the student will identify by filling in blank spaces provided.

b. Construction

(1) Prepare a drawing or diagram of item.

(2) Draw arrows pointing to part to be identified.

(3) At opposite end of arrow line, prepare a place for student to write the response.

(4) Sequentially number or letter the blanks.

(5) Example

5. True-False

a. Description - a test item consisting of a declaratory statement that is either right or wrong with provisions for marking true or false.

b. Construction

(1) Include only one idea in each statement.

(2) Place the crucial element at or near end of the statement.

(3) Avoid negatives as they tend to confuse.

(a) Highlight negative word or phrase.

(4) Do not use double negatives, and extremely long statements.

(5) Avoid ambiguous statements.

(6) Exercise care in using "specific determiners," and "modifiers."

(a) Specific determiners (all, more, never, always, certainly) tend to suggest an incorrect statement.

(b) Modifiers (sometimes, generally, and usually) may suggest a correct statement.

(7) Make approximately half the items true and half false.

(a) Minimizes guessing the correct answer

(8) Randomly distribute true and false items.

(a) To avoid patterns

c. Examples

1. (F) The volt is the unit of resistance.

2. (T) Flying airplane models are usually made from balsa.

6. Cluster True-False

a. Description - A group of true-false test items dealing with the same topic.

b. Usage

(1) True-false items are adaptable to a troubleshooting situation where more than one component can cause the problem.

(2) This type of test item requires the student to determine logically which associated component could or could not cause the stated problem.

(3) EXAMPLE:

During a normal start up the simulated engine fires, then, the rpm drops to zero. Using the diagram furnished by the instructor, circle T if the listed trouble could cause the symptoms described; circle F if the listed trouble could NOT cause the symptoms described.

(1) T F The OUT-OF-FUEL relay, K7, is not energizing.

(2) T F The MASTER-ON relay, K6, has an open pin 6.

(3) T F The FUEL VALVE OPEN relay, K10, is hung energized.

(4) T F The ENGINE FLAME relay, K12, has an open pin 4.

B. Performance Tests

1. Definition - The measurement of a learning objective that requires the student to perform a specified task. If the Learning Objective requires the student to focus a radar, or weld a joint, then the test item will require the student to focus a radar, or weld a joint.

2. Types of Performance Evaluation Instruments

a. Checklist

(1) Description - a list used by test administrator containing all the well defined steps which must be integrated or sequentially performed for a process to be successful. Safety precautions, utilization of tools, equipment, facilities, etc., can be included on checklist as well as procedural steps being tested. Constant observation is required.

(2) Construction

(a) Devise a checklist containing all the important and essential steps and factors required for successful performance.

(b) Includes

1. All steps

2. Processes

4. Utilization of tools
5. Equipment, etc.
6. Anything necessary for the evaluation of student performance

c. Example:

Evaluation Checklist (Perform Tape Reader Electrical Check and Adjustment)

Student Name: ______________________________ Date:__________

Rate: ______________________________________

Problem #3 (MTRE Mk 7 Mod 2)

Step	Step Description	Step Evaluation		Description of Error or Comment
	"Observation"	Yes	No	
1.	Used proper documentation: OP 3751, Vol 2, Part 4, SMP 24-7010			
2.	Installed system verification tape cartridge into tape reader--did not thread tape through tape reader mechanism			
3.	Pulled two spring lifter slides (before SPALT 7664) or pinch roller spring lifter slide (after SPALT 7664) and installed special test tape with sprocket holes adjacent to front panel; pushed in two spring lifter slides (pinch roller spring lifter slide after SPALT 7664)			

Evaluation Checklist (Cont'd)

Step	Step Description	Step Evaluation		Description of Error or Comment
	"Observation"	Yes	No	
4.	Installed rubber band to retain tape tension switch arm in open position			
5.	Pulled out tape reader dust cover interlock switch			
6.	Inserted extender card into tape reader test point connector J2B and connected oscilloscope ground lead to extender card test point 17			
	"Code Hole 6, Pulse Width Check:	NOTE:		Instruct student to depart from SMP to cover Code Hole 6 Pulse Width ONLY
7.	Connected oscilloscope channel a signal lead to extender card test point 6			
8.	Pressed AOP POWER ON and START TEST 9000 pushbuttons			

Figure 13.--Example of an Evaluation Checklist (Sheet 3 of 5).

d. Fill In

(1) Description - a test often used when constant observation of student performance is not necessary but a record of how student arrived at a determination/conclusion is essential in evaluating the performance.

(2) Usage

(a) Used by student to record an action, by writing a descriptive sentence, phrase or word on designated form as each step or process is completed.

(3) Evaluation

(a) By scorer without interpretation since the student records exactly what he/she actually does.

(4) Advantage

(a) Few scorers/administrators may evaluate large numbers of students.

(5) Construction

(a) Devise a form on which students will record information during testing.

(b) Sections of form will be designated for specific information to be recorded.

(c) All factors on which the performance will be evaluated will have entry spaces for recording information.

c. Final product

(1) Description - a type of test where emphasis is placed upon the final product, rather than procedures or process. The student will be scored only on the quality, or quantity of the final product as it compares to a standard model.

(2) Construction

(a) Develop a model of the final product as the standard for evaluation.

(b) Provide students in writing:

1. Instructions on what they are assigned to do.

2. Necessary specifications.

3. Quantity/Quality requirements.

4. safety factors that must be observed.

5. Time limitations if applicable.

6. Any necessary drawings/diagrams.

7. Where and how they will obtain any needed tools, equipment or materials.

8. A course of action to take in the event of an accident (if applicable).

9. A course of action to take in the event insurmountable difficulty is encountered in the accomplishment of assigned project.

d. Combined

(1) Description - This is an incorporation of the best features of two or more of the previously mentioned types.

(a) This may be used when the process, or steps, are of relatively equal importance.

(b) A model must be available for comparison of student's final product.

(2) Construction

(a) Devise the recording checklist (if necessary).

(b) Devise student fill-in form (if necessary).

(c) Develop the standard model.

(d) Develop an objective pass-fail scoring procedure based on the learning objective's stated standard.

TITLE: STUDENT FACTORS AFFECTING LEARNING

INTRODUCTION:

The purpose of this information sheet is to provide additional enrichment materials on factors affecting learning. Although not all this information is based on hard fact, the information provided will prove useful in coping with individual situations that develop during your future instructor assignment.

REFERENCES:

1. NAVPERS 16103-C, Manual for Navy Instructors, Chap. 2
2. Overseas Diplomacy Manual
3. Biehler, Robert F., Psychology Applied to Teaching
4. Klausmeier, Herbert J., and Goodwin, William, Learning and Human Abilities, 4th Edition.

INFORMATION:

A. The Learning Senses (Six Avenues of Communication)

1. Sight 75%
    - a. Most important of the learning senses.
    - b. Student with poor eyesight should be in front of the room.
2. Hearing 23%
    - a. Second most important learning sense.
    - b. Students hard of hearing should be seated in front of the room.
3. Taste
    - a. Least used in the Navy
        - (1) One exception should be the Navy's Mess Halls.

4. Smell
    a. Not used extensively in the Navy.
    b. Can be used to detect:
        (1) Marijuana
        (2) Burned brakes or clutch
        (3) Fire
5. Touch
    a. Needed for skills.
    b. Resides on the surface of the skin.
    c. Sensitive to heat, pressure, and feeling of the skin.
6. Kinesthesia
    a. The sensation/perception of position, movement or tension
    b. Resides in muscles, tendons and joints and is stimulated by bodily tensions.
    c. Muscle sense
    d. Muscle coordination

B. Common Student Characteristics
    1. Belief in Maturity
        a. Students regard themselves as mature adults in an adult organization, and want to be treated as such.
            (1) Students think they are mature
                (a) Physcially
                (b) Mentally
                (c) Emotionally
            (2) Students resent being treated as KIDS.

b. Belief in maturity can be a powerful tool in the hands of a wise instructor.

  (1) The wise instructor will infer the class is composed of adults.

  (2) He/she will expect an adults work, and will usually get it.

2. Desire to Succeed

  a. Everyone wants to succeed; success is a pleasant sensation.

  b. Some students may assume an attitude of indifference.

    (1) Such an attitude is often a mask.

      (a) To hide true feelings

      (b) To attract attention

      (c) The instructor can usually determine the cause of this attitude through private conference and in most cases, can help remove the cause.

  c. Desire to succeed is another powerful tool in the hands of a wise instructor.

    (1) He/she will carefully explain the reason behind the task assigned; because men/women work harder and longer when they know the reason why.

    (2) He/she will give praise and credit when deserved.

3. Ability to Evaluate

  a. No group is more critical than students.

  b. Students are quick to form opinions about:

    (1) The instructor

    (2) The course

    (3) The command

  c. Students are quick to detect any lack of sincerity, enthusiasm, or competence.

   - (1) Students are just as quick to detect positive attributes of these qualities.

- d. Students will voice their views and opinions in no uncertain terms.

- e. The wise instructor will give no opportunity for adverse opinions.

   - (1) He/she will be prepared at all times.

   - (2) He/she will be systematic and positive in work.

   - (3) He/she will set the example.

   - (4) There will be some incorrect evaluations made by individuals, but mass opinion is usually a reliable evaluation.

4. Fallibility

   - a. The good instructor knows all students make mistakes.

   - b. He/she should never become discouraged when students fail to progress at the rate he/she expects.

   - c. He/she must remember they were once a beginner.

5. Desire for competition

   - a. It is natural with American people.

      - (1) That is why we have organized sports.

      - (2) That is why we take sides in any contest.

   - b. The instructor should try to provide controlled competition.

6. Desire for fair play.

   - a. Also natural with Americans.

   - b. Fair play is essential to justice.

   - c. Trainees prefer firmness in a leader, if he/she is fair.

   - d. The instructor must insure fair play in the classroom at all time.

- (1) No favoritism.
- (2) Don't fall for the apple polisher tricks.
- (3) Equal distribution of questions among class.
- (4) Equal supervision during lab, or work assignments.

e. Don't allow the eager students to dominate.

f. Don't ignore the quiet, the timid, or the reserve students.

7. Recognition

    a. All students desire recognition.

    b. A psychological need for all people.

    c. Instructor should make assignments according to student ability.

        (1) Give recognition when deserved.

        (2) Make certain the praise rings true with performance.

        (3) To praise poor effort undermines the instructor's credibility.

C. Areas of Individual Differences/Handling Individual Differences

1. Physical.

    a. Hearing, vision, etc.

    b. Tall and short students

    c. Ensure that the obvious ones are compensated for.

2. Aptitude

    a. Definition - Capacity for learning.

    b. Differences in aptitude.

        (1) Fast learner - learns very quickly.

            (a) Encourage them to read widely.

            (b) Use them as assistants (use caution).

(2) Average learner - learns at an average rate.

(a) The major portion of our students.

(b) Training aids, subject matter is developed using this group as a reference.

(c) Generally does not create any problem.

(3) Slow learner - learns at a slow rate.

(a) May be slow in acquiring knowledge but fast in developing skills or the opposite may be true.

(b) Needs help individually.

(c) Praise and encourage them.

(d) Use instruction sheets.

(e) Team them with fast learners (caution).

3. Emotional.

a. Extrovert - preference for practical affairs or action.

(1) Turns self outward.

(2) Usually outspoken and bullish.

(3) Tendency to create discipline problems.

(4) Maintain control at all times.

(5) They have a tendency to make good leaders. Utilize in class/lab activities.

b. Introvert - preference for the imaginal or fantasy world.

(1) Nonaggressive, shy, quiet type.

(2) Turns self inward.

(3) Try to encourage them to answer questions and participate.

(4) Treat them kindly and patiently.

c. Ambivert - combination of extroversion and introversion.

(1) The average student.

(2) Usually poses no problems.

4. Ability

a. Definition - possessing the knowledge and/or skill to perform a task.

b. The levels of ability in your classroom will vary greatly because of the different educational backgrounds of your students.

c. Teach on a level commensurate with the ability level of the class.

5. Geographical Differences

a. USA - students come from all areas of the country.

(1) Colloquialisms

(2) Speed of speech

(3) Accents

(4) Do NOT ridicule a student because of his/her accent or use of colloquialisms.

(5) Do NOT belittle a student because he/she grew up in a particular part of the country, i.e., Devils Lake, North Dakota; Butte, Montana; New York City, etc.

b. Foreign Students

(1) Cultural differences

(2) Language differences

D. Causes of Individual Differences

1. Heredity

a. Definition - the genetic transmission of mental and physical characteristics and potentialities from parent to offspring.

b. Heredity operates to influence both the nature and the development of an individual's mental and physical abilities and characteristics.

c. Examples: size, hair color, athletic ability, intelligence, etc.

2. Environment

a. Definition - the combination of mental and physical conditions that affect and influence the growth and delopment of an individual.

b. Socioeconomic status, peers, nutrition, religion, emotional climate, schools attended, communities lived in and many other environmental factors influence the development of an individual's mental (intelligence) and physical abilities.

c. Because of the complexities in measuring intelligence and environmental factors, it is impossible to come up with any definitive statement about the relative influence of heredity and environment.

d. A number of researchers feel that approximately 20 percent of the variability of intelligence is due to environmental factors.

e. The implication is that training does have influence on an individual's intelligence, regardless of whether the student is a slow learner, average learner or a fast learner.

E. Instructing Foreign Students

1. Foreign students attend USN schools as a result of training required to support military equipment obtained from the U. S. under Foreign Military Sales (FMS) or to assist foreign countries by a grant aid in developing expertise needed for effective management and operation of its defense establishment. Refer to OPNAVINST 4950.1F for more details.

2. All foreign students, unless otherwise directed, will be evaluated using the same performance criteria as used for U. S. students.

3. The cost of sending foreign students to military schools is being paid by the respective nations, NOT by the Department of Defense.

4. BEWARE of religious affiliations/requirements.

   a. Religious holidays or events.

   b. Some students will not be able to attend class because of religious obligations. Refer to OPNAVINST 4950.1F for specific guidance.

   c. Students also may be restricted in the tasks they are allowed to perform.

5. Determine whether the foreign student comes from a critical or non-critical society.

   a. Critical Society - a society which severely judges the conduct of its members. Usually characterized by a rigid class structure which limits/controls the mobility/interactions among its members.

   b. Non-Critical Society - a society which is more tolerant of the behavior and conduct of its members. Characterized by social, political and economic mobility.

   c. Will affect the instructor's approach in dealing with foreign students.

6. Be knowledgeable of the environment variations.

   a. Coming from a different physcial, economic, political environment will have a dramatic effect on foreign student performance.

7. Be aware of different language or communication patterns.

   a. Oral - words used.

      (1) Words and phrases may have a different meaning to a foreign student.

   b. Mental - meaning behind the words.

      (1) Foreign students may have a different mental picture of your presentation than was intended.

   c. Emotional - emphasis/use given to particular words or phrases.

      (1) Avoid the use of emotional words and topics.

d. Contact Societies - some students come from societies where people are "touchers" they get very close to each other when talking. Americans are often uncomfortable in this situation.

e. Failure to take these patterns into consideration will result in needless barriers to communication between instructor and foreign student.

8. Use sign language with caution.

   a. Every country has both positive and negative gestures.

   b. A given gesture may have a positive, helpful or friendly meaning for one group of foreign students but negative, derogatory or insulting to another group.

9. Do not discuss religion, sex, or politics with foreign students.

10. Ensure that academic and disciplinary actions involving foreign students are carried out in accordance with command policy. When in doubt contact the Command Foreign Liaison Officer and appropriate country liaison representatives.

11. Customs strange to Americans.

   a. Men kissing each other or holding hands in public.

   b. Women treated like servants.

   c. Man's (spoken) word is a bond or contract.

NOTE: Remember Foreign students are our guests. Therefore we should be overly tolerant.

INFORMATION SHEET 1.20.1I August 1979

TITLE: EVALUATION OF INSTRUCTION

INTRODUCTION: The principles of classroom instruction cannot be adequately measured by written/performance testing and work alone. Specifically, the instructor's ability to apply the various factors affecting learning, to utilize the methods and techniques of instruction, to display a proper attitude and the characteristics of a quality instructor, and to "teach effectively" are best measured through direct observation of performance. Evaluation is not mere fault finding. The purposes of evaluation is to "cause improvement". A good evaluation consist of three elements that indicate WHAT the problem areas are, WHY they detract from the lesson's effectiveness, and suggestions on HOW to improve. This information sheet will provide guidance in conducting good effective evaluations of instruction.

REFERENCES:
1. NAVPERS 16103-C, Manual for Navy Instructors
2. NAVEDTRA 110, Procedures for Instructional Systems Development
3. NAVPERS 92050, Instructor Training, Excerpts from Naval Training Bulletin

INFORMATION:

A. Purposes of Evaluation

Training evaluation may be defined as the continuing and systematic audit of current training programs, to determine if the training is effective, if the speific curricula aims are being accomplished, and if improvements are required in any of the programs. This audit should also function as a means of appraising the achievement and growth of the individual trainees, and of identifying their needs. The purpose is twofold: (1) to check the effectiveness of instruction, and (2) to provide a continuing process for stimulating the improvement of instruction.

The supervisor, in his role as evaluator, therefore, engages in the following activities:

1. Evaluating the effect of the instruction
2. Evaluating the instructor's teaching plans
3. Evaluating the instructor's performance
4. Assisting the instructor to improve

Evaluating the Effect

The evaluator is interested in such factors as trainee interest and response, trainee success in application activities, informal test results, examination results, trainee success in future billets.

The instructor can assist the evaluator by maintaining clear and definite records of the results of tests and of formal examinations.

Evaluating Teaching Plans

The evaluator is interested in the instructor's lesson plans, instruction sheets, training aids, tests, examinations, and other tangible items that can be evaluated before or after the formal class session. All of these instructional devices have a positive bearing upon the instruction.

Evaluating the Instructor's Performance

In making an evaluation of the instructor's performance the evaluator is interested in such factors as the instructor's personal traits, his methods and techniques of instruction, the scope and accuracy of the subject matter as he presents it, and the attitude of the trainees.

Assisting the Instructor to Improve

The evaluator can contribute to the improvement of an instructor's performance by (1) identifying and strengthening those aspects of instruction which are good, (2) identifying areas of weakness and bringing these tactfully to the instructor's attention (and perhaps to the attention of the instructor's immediate supervisor), and (3) suggesting positive ways in which the weakness can be overcome.

These steps are equally valuable to the beginning instructor and to the experienced instructor. The beginner is still learning his trade, and he needs objective evaluation to show him his strengths as well as his weaknesses; while the experienced instructor may find that his teaching has become a matter of habit and that he should do something to avoid complacent teaching.

Instructional evaluations are most often made by supervisors, but other arrangements can be made and have some advantages. For example, evaluation by fellow instructors emphasizes by a group objective. Evaluation as a group undertaking has the further advantage that the participating instructors become familiar with the purposes and techniques of evaluation, and hence more receptive to evaluation of their own work.

Good results can be obtained by any of the following: (1) self-evaluation, in which the instructor rates himself by a standard rating device or by some other set of standards; (2) evaluation by fellow instructors; (3) evaluation by supervisors; and (4) evaluation by a committee chosen from the school staff, possibly including members from other schools.

B. Areas to Observe in Evaluating the Learning Process

The first area to observe is the contents of the instruction. Check the organization of the subject matter by examining the instructor's lesson topic guide, making sure it is complete and up to date.

Observe the classroom facilities for ventilation, heating, seating capacity, lighting and any other physical enviroment that affects the students.

Observe and evaluate the administration of rules and policies such as smoking or drinking in the classroom while teaching and any other general policies the instructor should abide by.

Observe and evaluate the instructional strategies. Was the teaching method correct for this particular lesson and were the training aids adequate and effective? Would another method have been more effective?

Observe and evaluate the characteristics of the instructor. Did the instructor display a monotone voice, was the rate of delivery correct and was the volume loud enough for all students to hear? Did the instructor maintain proper eye contact and were gestures used purposefully and at random or were they distracting? How was the instructor's attitude toward the students and subject matter? Was the instructor sincere and enthusiastic throughout the lesson? Were human values enhanced in the classoom? Did the instructor use proper oral questioning and training aid techniques?

Observe and evaluate the student's reaction to the instructor, subject matter and the instructional material. Did the instructor answer student questions? Were the students able to perform the tasks being taught and answer the instructor's questions?

C. Classroom Instructor Evaluation

Every instructor shall be evaluated at least four times each year with approximately 90 days lapsing between each evaluation. More frequent evaluation is encouraged and is necessary at the instance inadequate instructions is observed or determined from internal feedback. All newly assigned, first tour, instructors will be evaluated monthly for the first six months after graduating from the Instructor Training School and then on a quarterly basis.

Evaluation of instruction can be conducted on a scheduled and/or unscheduled basis. Each of these two procedures has its advantages and disadvantages. A scheduled evaluation allows the instructor to prepare himself/herself psychologically and instructionally for the evaluation. A scheduled evaluation also allows the instructor time to prepare a "show" that is not typical of usual performance. An unscheduled visit permits the evaluator to observe the instructor in his or her normal mode of teaching and can achieve a realistic appraisal of the instructor. However, an inexperienced instructor or an instructor lacking self-confidence may feel threatened at being evaluated and fail to perform as well as usual. There is always the possibility that an instructor will switch from usual performance and give the accepted "IT" course approach for the benefit of the evaluation. Both scheduled and unscheduled evaluations should be carefully used to achieve the advantages of each. No instructor should be evaluated during the first time he/she teaches a topic.

The form for evaluating classroom group-paced instructional setting is the CNET-GEN 1540/4 Instructor Evaluation. The form contains a prepared checklist of items covering important areas of any course of instruction. The form is to be prepared in triplicate. One copy will go to the instructor being evaluated as a basis for his/her personal instructor improvement plan; one copy will be forwarded to the CIS office (if applicable to local command); and one copy will be maintained within the school department for use during command inspections. When an instructor is transferred outside the training command, the evaluation record will be destroyed. The form is used to observe a complete lesson or to spot check one or more specific points in a lesson, i.e.training aids, instructor characteristics, instruction sheets, instructional strategies, student reaction.

The evaluator will place a check in the column that best describes the instructor's performance (poor, fair, good, excellent) for each element observed. To evaluate the instructor on each element, the evaluator should observe the instructor for at least one complete instructional period. The evaluator will use the bottom of the front and the top of the reverse of the form to make comments and recommendations. After reviewing the written evaluation and the oral critique of the evaluator, the instructor will use the bottom of the reverse side of the form to outline a plan to improve his or her performance. This section will give the instructor's overall opinion of the evaluation and critique and will be a bench mark for the instructor to gauge future professional growth. Guidelines for completing the Instructor Evaluation form are as follows:

1. Date - enter date of the evaluation.

2. Instructor - enter name of the instructor being evaluated.

3. Grade - enter rate/paygrade of the instructor.

4. Course - enter course title.

5. Unit/period - enter the unit and period of the lesson being evaluated.

6. Lesson topic title - enter the title of the lesson being taught during the evaluation.

7. Elements of a learning session provided by the instructor - place a check mark in the appropriate column that reflects the instructor's performance in each intermediate area. Standards for use in observing classroom instruction is provided at the end of this information sheet.

8. Instructor techniques - place a check mark in the appropriate column that reflects the instructor's performance in each intermediate area.

9. Trainee/Student responses - place a check mark in the appropriate column that reflects the instructor's performance in each intermediate area.

10. General evaluation of instructor - place a check mark in the appropriate column that reflects the instructor's overall general performance.

11. Remarks - entries made to emphasize qualities demonstrated by the instructor that are noteworthy of excellence in performance and to identify areas of weakness and provide guidance to assist the instructor in overcoming his/her weaknesses.

12. Instructor guide previewed - check yes or no as applicable.

13. Signature - the evaluator signs and dates the evaluation certifying that a critique of the evaluation has been performed.

14. Remainder of the form is to be completed by the instructor being evaluated. After receiving the evaluation record and an oral critique by the evaluator, the instructor will use this area to outline a plan to improve his/her performance. The instructor then signs and dates the evaluation record.

Procedures for Conducting an Evaluation

Preliminary Meeting

The preliminary meeting with the instructor gives the evaluator an opportunity to explain in advance the purpose of the evaluation, and to indicate its place in the overall evaluation program conducted by the school.

At this meeting the instructor should furnish relevant information about himself/herself, the subject matter, the trainees, and any special situations that may exist. For example, the evaluator will need to know the kind of subject matter being taught, its relative difficulty, areas that consistently prove difficult for the trainees; he/she needs information with respect to the instructor's training, previous experience, interests, and instructional problems; he/she must learn something of the background attitudes and progress of the trainees; and he/she should be aware of any unusual situations that might affect his evaluation, such as a situation where instructional time has been shortened for some reason, or where the instructor is teaching for the first time, teaching a subject outside his/her rating, or substituting for another instructor in an emergency situation.

Advance contact is also a help for the instructor, serving to put him/her at his ease, and to give him/her an objective view of the evaluation procedures and goals.

Early Arrival

By arriving before the lesson actually begins, the evaluator has an opportunity to collect any last-minute information that might modify the results of the preliminary interview. He/she can obtain copies of instruction sheets or other written material that will be used by the instructor and the trainees during the lesson. He/she should take his/her place in the training area with a minimum of distraction.

Observation of the Instructor

The evaluator should observe the class for a minimum of one instructional period. This period extends from break to break, and is normally of 50 to 60 minutes duration. If the evaluator remains for part of the period only, he/she accomplishes very little, and his/her departure distracts the instructor and the trainees. Period of evaluation should be determined in the preliminary meeting.

The evaluator should observe the instructor in all activities for which the instructor is normally responsible. It is important to observe the instructor as he teaches different kinds of subject matter, and handles different parts of the lesson. Some instructors are very effective in presenting subject matter, but weak in summarizing, in devising informal tests, and in giving assignments or supervising application exercises.

Conduct of the Evaluator

The evaluator normally maintains a poker face during the class session, and particularly avoids showing any displeasure or disapproval. Even his/her note-taking should be done as discreetly as possible; he/she can choose a position where the trainee will not see his/her writing, and he/she can make his/her notes when the instructor is occupied with checking the lesson plan, placing illustrations or notes on the chalkboard/VAP, or helping a trainee solve a problem. The evaluator should contact the instructor at the close of the lesson, and comment immediately upon the good points of the lesson. He/she should then arrange for a follow-up interview with the instructor, to be held as soon as possible.

Situations may arise where the evaluator is tempted to participate in the lesson; for example, the instructor may make a statement that is entirely incorrect, may give an explanation that is obviously confusing to the trainees, may make an error in working a problem, or may ignore a trainee who wants to ask a question. However, the evaluator should refrain from interrupting the lesson, since to do so may break the instructor's train of thought, or lower the trainees' respect for the instructor.

The situation is somewhat different, of course, if the instructor requests information of the evaluator. In such a case, the evaluator should give the information in as brief a manner as possible, and should then resume his/her role as a nonparticipant.

Conduct an evaluator/instructor critique

Success of this type of critique depends upon the skillful handling of human relations by the evaluator. If his/her attitude reflects sincerity and desire to help, and if he/she enlists the cooperation of the instructor, the critique should accomplish the desired results. The evaluator should make use of counseling techniques; he/she should avoid overstressing weaknesses; he/she should give practical assistance to the instructor; he/she should keep the interview on a friendly basis; and he/she should end the critique on a positive tone. The evaluation record is then routed: one to the instructor being evaluated, one to CIS (if required) and one to school supervisor.

The evaluator uses counseling techniques to help the instructor to determine his own weaknesses and strengths. He can accomplish this by putting a series of questions to the instructor: How satisfactory was trainee response to your questions? What do you think may have caused poor performance on the part of some of the trainees? Are any improvements needed in the questions which you asked?

In dealing with instructor weaknesses, it is advisable not to mention a weakness unless there is a suitable suggestion for effecting improvement. If the evaluator stresses a weakness, and has no positive suggestions for improvement, the instructor may resent the criticism, or he/she may lose confidence in the evaluator.

The evaluator should give assistance to the instructor in making necessary changes or modification in the lesson plans. Final changes should incorporate suggestions that have the concurrence of the evaluator and the instructor.

The evaluator should develop a friendly working relationship with the instructor, giving due credit to what is satisfactory in the instructor's performance, and being sincere in his efforts to develop and improve the weaker areas. To stimulate improvement, his approach must be positive and constructive, and he should close the interview with an offer of further assistance, if it should be needed. The evaluator may consider that he has properly accomplished his duties if, at the close of the interview, the instructor knows what is expected of him, understands what he must do to improve his performance, and is willing to make the effort.

D. Instructor Self-Evaluation

Self evaluation is a necessary adjunct to self-discipline and self-direction, and these are basic to mature, responsible work of any kind. The good instructor always tries to find ways to improve his effectiveness; and one way is to review every lesson after it has been taught, to determine what was done well and what could be improved.

Self-evaluation is worthless without honesty and without objectivity. Honesty is up to the man himself. This text can only recommend it. A measure of objectivity can be gained by setting up a list of activities and qualities and then rating on each item individually. Such a list is furnished in the Self-Evaluation Checklist for Instructor's included as part of this information sheet. Additionally, aids such as audio and video taping equipment can provide essential data for objective self-evaluations.

Summary

A comprehensive program of evaluation is an important part of every training situation. Evaluation highlights the needs of the training program both in terms of developing military responsibility, and of meeting current requirements for knowledges and skills. It determines the quality of the instruction given, and the actual results of the instruction; and it serves to stimulate the improvement of instructional methods and techniques.

Any appraisal of a training program must compare all elements of instruction with the objectives of the program. Techniques and devices must be selected or developed to measure how well these objectives are being accomplished. Data must be correctly interpreted, and the findings should support either acceptance of the present situation as satisfactory or positive, practical steps toward improvement.

Evaluation of instruction should not interfere with established instruction schedules, and should not subject the individual instructor to embarrassment or to loss of prestige in the eyes of his trainees. Evaluation devices commonly used in Navy training are the Instructor Evaluation and the Self-evaluation Checklist. In addition to these, the evaluator should keep fairly complete records of the evaluation procedure, so that he may more effectively discuss his findings with the instructor concerned.

In stimulating the improvement of instruction the evaluator utilizes the evaluator-instructor critique. The concepts and principles of human relations are essential in winning the sincere cooperation of the instructors in promoting improved methods and techniques. Evaluation is not necessarily limited to supervisory personnel. Instructors should observe each other's classes; mutual help is an excellent moral factor, and often stimulates improvement. Some type of evaluation program should be instituted at every Navy training activity, to provide objective data and valid appraisal on the adequacy of the instruction.

SELF-EVALUATION CHECKLIST FOR INSTRUCTORS

Here is a Chance to Find Out How Good Your Teaching Practices Are

Directions for using the test

This checklist consists of 25 questions, each of which has been given a maximum score. A question is valued according to the part it has in making a good instructor.

The checklist assumes that you know your subject matter well. No matter how skillful you may be in teaching, you cannot be a good instructor unless you learn your subject thoroughly and keep alert for all new developments in your field.

Read each question careful. Then consider all the good practices that add up to make the maximum score. After this, estimate as well as you can how closely you are following good practices and score yourself accordingly.

Remember this is a self-evaluation. Its value for you will depend upon how honest you are with yourself. When you have finished, add up your score and compare it with this scale:

90 or above is outstanding
80 to 89 is above average
70 to 79 is average
62 to 69 is below average

If your score is below 62, you will know that there is a definite need for you to improve. You will have to change many of your teaching habits.

	My Score	Maximum Score
1. Do I check the physical aspects of my classroom, shop, or laboratory? Good instructor make every effort to improve the environment. They insist on: (1) Good lighting (2) Proper heat (3) Good ventilation (4) Good equipment (5) Best possible arrangement of equipment	( )	(4)

	My Score	Maximum Score
2. Do I introduce myself at the first session? Good instructors: (1) Write name on chalkboard/VAP (2) Pronounce their names (3) Tell something of their background	( )	(1)
3. How well do I learn names? Good instructors: (1) Make out seating charts, particularly for large groups (2) Address questions to individuals (3) Use principle of association	( )	(3)
4. Do I get essential information regarding each trainee? Here are some suggestions on how to get it: (1) Use Qual cards if available (2) Have men fill out a questionnaire (3) Interview each man (4) If time does not permit interviewing all trainees, talk to those who seem to need special attention	( )	(4)
5. Am I punctual and do I expect punctuality? Good instructors: (1) Start their classes on time (2) Are punctual for all appointments and expect the same from all men	( )	(2)
6. Am I an example of good military bearing and neatness? Good instructors recognize that: (1) They are leaders (2) Good example has value	( )	(2)

	My Score	Maximum Score
7. Do I address the class effectively? Good instructors: (1) Talk to everyone, including trainees in the back row (2) Avoid personal mannerisms particularly distracting ones (3) Judge their effectiveness to some extent, by observing expressions (4) Do not talk to the chalkboard/VAP or walls	( )	(2)
8. Am I careful with words? Good instructors: (1) Make their points clear by using words which can be understood (2) Always explain the meaning of unfamiliar or technical terminology and write the terms on the chalkboard/VAP (3) Recognize that abusive language or profanity engenders disrespect and will not force trainees to learn (4) Avoid sarcasm	( )	(4)
9. Do I develop a satisfactory lesson plan for each class? A good lesson plan has: (1) A simple but complete statement of what the trainees are expected to learn (2) A list of equipment and materials needed, including training aids: charts, films, recordings, film strips, etc. (3) An introduction for the lesson (4) Ways of presenting the lesson (5) Application and testing procedures (6) Summary of lesson with provision for reteaching facts or skills when necessary	( )	(12)

My Score Maximum Score

10. In the laboratory and shop do I limit talking to a minimum so that the men can get to work? ( ) (3)

Good instructors recognize:

(1) Valuable time is lost by too much explanation
(2) Experience in teaching, a study of the trainees, and an intelligent use of questions help a good instructor recognize when he should stop talking

11. Do I keep my classroom shipshape at all times? ( ) (2)

Good instructors:

(1) Insist upon an orderly arrangement of chairs, tables, and equipment
(2) Insist that all trash be put in receptacles provided for this purpose, so that, at the end of the period, working areas are ready for the next class

12. Do I avoid waste of time, keeping every man occupied with constructive work? ( ) (3)

Good instructors:

(1) Avoid "busy work" for its own sake
(2) Avoid aimless repetition
(3) Have a constructive assignment for every trainee at all times

13. Do I keep my men at work until the end of the period? ( ) (2)

Good instructors:

(1) Prevent "horse play"
(2) Have men who complete their work ahead of schedule either help others or take another assignment

14. Am I human yet dignified? ( ) (5)

Good instructors:

(1) Find out what is wrong when they do not get along well with their trainees
(2) Do not need to remain aloof on the principle that "familiarity breeds contempt"
(3) Dispense with unnecessary formality

	My Score	Maximum Score
15. Do I prepare teaching aids before class time? In order to make the best use of instruction time good instructors: (1) Draw neat chalkboard/VAP diagrams beforehand (2) Have appropriate training aids ready for use (3) Have necessary bulletins, texts, etc. in the classroom	( )	(3)
16. Do I get the fullest possible use out of training aids? Good instructors: (1) Know when to use training aids (2) Improvise training aids whenever necessary (3) Make a careful study of a training aid before they present it	( )	(4)
17. Do I create learning situations? Good instructors: (1) Know that a man must be trained to think about what he has learned (2) Stimulate group discussions and employ questions freely (3) Organize the instruction, as much as possible, in the form of problems	( )	(5)
18. Do I stress practical applications? Good instructors: (1) Recognize that all learning must be applied (2) Give examples of uses to which information can be put	( )	(3)
19. Do I let men "learn by doing"? Good instructors: (1) Realize that lectures and demonstrations have their place but that trainees learn only after practice (2) Limit lectures and demonstrations so as to give their trainees time to "learn by doing"	( )	(10)

	My Score	Maximum Score
20. Does every man know what is to be accomplished each period? Good instructors find that they get the best response when they acquaint their classes with the objective for each lesson in advance	( )	(3)
21. Do I observe sound principles of learning? Good instructors recognize that: (1) It is desirable to move from the simple to the more complex, from the known to the unknown (2) They are working first with people, secondarily with subject matter (3) Trainees must be motivated (4) Frequency review is necessary to prevent forgetting	( )	(3)
22. Am I making every effort to meet the needs of individuals? Good instructors recognize that their trainees differ in interests, needs, abilities, and experience. Consequently they make every effort to adjust their instruction to the individual.	( )	(7)
23. Do I summarize at the end of each period? Good instructors summarize by: (1) Listing main points on the chalkboard/VAP (2) Questioning trainees orally (3) Conducting a short written objective test	( )	(4)
24. Do I use the most effective type of examination? Good instructors: (1) Ensure that criterion testing principles are employed (2) Ensure each student thoroughly understands specific instruction for each testing situation (3) Ensure testing conditions remain constant for each student	( )	(4)

	My Score	Maximum Score
25. Do I make full use of test results? Good instructors recognize that tests: (1) Help trainees review and organize subject matter (2) Help determine knowledge of the subject (3) Help trainees determine progress and standing (4) Help instructors find weak points in their teaching	( )	(5)
Total Scores	( )	(100)

STANDARDS FOR USE IN OBSERVING CLASSROOM INSTRUCTION

The definitions of the standards have been prepared to assist the observer in increasing the objectivity of the observation. They are by no means complete nor all-inclusive; they do, however, encompass the most important factors used in describing the standards.

ELEMENTS OF A LEARNING SESSION PROVIDED BY THE INSTRUCTOR

PREPARES TRAINEES/STUDENTS FOR LEARNING.

1. Provides learning objectives.
2. Motivates in terms of HOW the material is to be used.
3. Motivates in terms of WHY the material needs to be learned.
4. Conveys enthusiasm to the trainee/student.

E = EXCELLENT

Establishes a favorable atmosphere for the lesson. States and displays the objectives, title, and major teaching points of the lesson in terms of student requirements. Shows relationship of the present lesson to past and future lessons and this stimulates the students into becoming active participants during the lesson. Elicits an active participation from students through an enthusiastic manner. Introduces self if necessary.

G = GOOD

Presents objectives, title of lesson in terms of student needs. Introduces self if necessary. Clarifies objectives, title, and major teaching points. Ties lesson to past lessons. Motivated in approach.

F = FAIR

States objectives, title, and major teaching points in terms of student needs with little if any emphasis. Introduces self if necessary. Evidences some enthusiasm.

P = POOR

Formally announces lesson objectives, title, and major teaching points. Depends on title and major teaching points. Fails to emphasize importance of lesson. Students evidence some confusion regarding lesson content. Instructor did not relate lesson to either preceding or succeeding instruction. Appears complacent and unmotivated in approach.

ESTABLISHES AND MAINTAINS RAPPORT IN A PROFESSIONAL MANNER.

1. Senses trainee/student needs.

2. Holds the respect of the trainees/students.

3. Allows trainees/students to communicate with him/her.

E = EXCELLENT

Emotionally well-balanced; always courteous and poised; objectively decisive; enthusiastic; conveys interest in subject; aware of students' difficulties; friendly but avoids over-familiarity; dynamic and aggressive; displays sense of humor; able to see student's point of view; open to two-way communication; held in esteem by students; confident.

G = GOOD

Cheerful; well-balanced; courteous; poised but with some effort; tries to be objective; tactful in most situations; friendly with an understanding of the student's point of view; decisive; determined; respected; steady.

F = FAIR

Emotionally stable but somewhat upset by the unexpected; usually patient; civil; conforms to conventional practices; somewhat serious, reserved, or exacting; generally says the wise thing; consistent; moderately firm.

P = POOR

Somewhat oversensitive; easily upset; often hurts students feelings; somewhat unconventional in terms of polite practices; aloof; talks down to students; impatient; cold; hesitant; timid; apologetic; wavering; somewhat over-familiar with students; lacking self-confidence.

PROVIDES CLARIFICATION, AMPLIFICATION, AND REINFORCEMENT OF THE LEARNING OBJECTIVES AS NECESSARY FOR ACHIEVEMENT.

1. Handles behavior problems in an effective manner.

E = EXCELLENT

No confusion on part of instructor or students. All discussion between instructor and student is free. Asks thought-provoking questions. Explains so weakest student understand and more gifted students are not bored. Uses forceful examples and illustrations. Summarizes and checks for understanding. All students purposefully occupied on assignment.

G = GOOD

Instructor is not confused. Asks and answers all questions satisfactorily. Checks for understanding. Ties in points with students' experiences. Summarizes. Most students occupied on assignment. Some inattentiveness noted.

F = FAIR

Rarely confused. Able to explain reasonably well. Makes good use of contrast and comparisons and of visual aids. Can clarify to all except poorest students. Some students seek help from instructor while others are reluctant. Few students monopolize instructor's time.

P = POOR

Provides opportunity for student participation by questions. Provides for application of principles. Few students take part. Aggressive students monopolize discussion or demonstration. Aggressive students only demonstrate interest. Classroom inattentiveness noted throughout entire lesson. Students not gainfully engaged in productive academic achievements.

INSTRUCTOR TECHNIQUES

SELECTS AND USES MEDIA AND/OR FACILITIES EFFECTIVELY.

E = EXCELLENT

Displays thorough familiarity with all equipment, training aids and media used. All media introduced with enthusiasm; follow-up and tie-in thorough and effective. Students display enthusiasm and interest. No excessive equipment or training aids utilized. All equipment, training aids, and media were of an enhancing nature to the lesson, never distracting.

G = GOOD

Displays skill at chalkboard/VAP. Required sketches on chalkboard prior to start of class. Makes complete introduction to training aids and conducts effective follow-up. Equipment, training aids, and media are well selected and sufficient in number. Room well ventilated when darkened for use of films or transparencies.

F = FAIR

Minimum amount of equipment, training aids, and/or media used. Shows evidence of some preparation for the lesson. Makes introduction and follow-up; however, due to minimum amount of equipment, training aids, and/or media being utilized, the lesson appears to lack momentum in part.

P = POOR

Ateempts to utilize equipment, training aids, and/or media but shows lack of confidence or preparation. Poor selection of equipment and/or training aids. Inadequate introduction to aids. Makes introduction but does not follow-up. Inadequate ventilation.

USES INSTRUCTIONAL SKILLS EFFECTIVELY.

1. Teaches on the trainee's/student's level.

2. Uses good questioning techniques.

3. Uses a well modulated voice.

E = EXCELLENT

Exceptionally well-organized; interesting, coherent, and unified; smooth transitions from one phase of lesson to another; clever and unique approach; ingeniously exploits student contributions and leads; cleverly adjusts work to individual needs; understands student learning difficulties; uses many vivid and apt illustrations and examples. Effective use of voice to express degrees of thought, emphasis, and sincerity. Constantly asking thought-provoking questions. All questions clearly and concisely worded. Questions asked in orderly sequence. Always states question before calling on students. Pauses for students to think. Calls on students and tactfully recognizes all answers. Acknowledges good questions complimentarily.

G = GOOD

Well-organized; interesting and informative; understandable and clear; good transitions; appropriate variety in techniques and materials; effectively uses student leads and contributions; handles the unexpected quiet well; adapts work to individual needs with better than average success; uses examples and illustrations effectively. Superior in voice-color and quality. Presentation free from artificiality. Corrects wrong answers tactfully. Uses thought-provoking questions. States questions before student's name in most cases. Questions clear and concise. Encourages students to ask questions. Asks questions of all students. Student-interest demonstrated by asking questions.

F = FAIR

Good presentation; well-organized; techniques appropriate but limited in variety; attends to obvious student difficulties; uses notes inconspicuously; usually makes transitions smoothly; some use made of student leads; handles most unexpected situations well; uses appropriate illustrations and examples. Voice has some color but sometimes monotonous. Free from distracting gestures or mannerisms. Asks sufficient number of questions. States questions before student's name frequently. Questions distributed evenly. Avoids "group" questions. Some thought provoking questions.

P = POOR

A barely acceptable presentation because of faulty organization, abrupt transitions, marginal application of techniques; instruction borders on the dull, prosaic, and plodding; no use made of student leads; instructor relatively inflexible; reads notes frequently; treatment of students impartial but unsympathetic; frequently fails to understand student learning difficulties; illustrations or examples infrequently used or inappropriate. Gestures or mannerisms somewhat distracting. Speaks too slowly or too fast. Hesitates, using "er's" or "ah's". Atmosphere strained. Delivery stilted. Too tense, or too relaxed. Asks insufficient number of questions. Passably worded--some ambiguous. Calls student's name first in portion of questions. Encourages few questions from students. Displays some tact in handling wrong answers.

SHOWS CARE IN PERSONAL APPEARANCE.

E = EXCELLENT

A near-perfect model and standard in appearance; complete uniform as prescribed by local regulations; evidence of special attention to shine of brass and shoes. Fit and press of uniform neat, clean, and well groomed.

G = GOOD

Uniform as prescribed; moderately neat and well groomed; detail of personal care generally adequate.

F = FAIR

Uniform conforms to minimum standards of neatness. No appearance of any extra effort applied towards shoes, brass.

P = POOR

Untidy or sloven in attire and personal care; posture unmilitary.

DEMONSTRATES FLEXIBILITY IN ADJUSTING TO UNPLANNED AND EXTEMPORANEOUS LEARNING SITUATIONS.

E = EXCELLENT

Handles unexpected decisively. Enthusiastic; considerate, always courteous and poised; confident.

G = GOOD

Steady in manner; able to sustain in unforeseen circumstances. Careful in approach; consistent in his application.

F = FAIR

Approach is moderate and consistent. At times unforeseen circumstances cause minor delays in instruction. Overall application adequate.

P = POOR

Easily flustered by unforeseen problems or situations. Impatient; oversensitive; not able to think smoothly while on his feet in an instructional situation.

DISPLAYS KNOWLEDGE OF SUBJECT MATTER.

E = EXCELLENT

Demonstrates mastery of subject; genuine scholarship; rich store of information pertinent to situation; exceptionally well-chosen illustrations; wide knowledge of related fields; well organized.

G = GOOD

Accurate and well-organized knowledge of field; strong background for subject being taught; comfortable knowledge of allied fields; uses variety of illustrative material.

F = FAIR

Knowledge limited to specific area of teaching responsibility but clearly adequate for present teaching duties; average command of information in instructional field; organized.

P = POOR

Information bordering on the inadequate; information disjointed, superficial; occasional errors in fact; occasional ambiguities and misleading statements; sometimes tries to bluff.

DEMONSTRATES ADEQUATE CAPABILITY IN THE UTILIZATION OF LEARNING MATERIALS.

E = EXCELLENT

Completely and thoroughly prepared; imaginative planning; intelligent and comprehensive organization of material; evidence of complete and thoughtful planning for meeting individual and class differences; objectives valid, obtainable, and clearly set forth; techniques selected require student participation.

G = GOOD

Very well prepared; material well-organized; evidence of thoughtful planning; objectives well defined; plans for meeting individual and class differences; selects an appropriate variety of techniques and materials.

F = FAIR

Obviously planned and with some imagination; shows consideration for individual and class differences; objectives clearly defined; organization adequate; simple to complex emphasized; recognizes need for integration; method and techniques appropriate.

P = POOR

Planning incomplete and superficial; provision made for meeting needs of faster or slower students with little regard for others; objectives not clearly defined; organization and continuity somewhat lacking; extremely limited provision for integration.

MANAGES TIME EFFICIENTLY.

1. Shows evidence of careful planning of presentation.

E = EXCELLENT

Lesson was planned and managed efficiently. Instructor was acutely aware at all times of the lesson scheduling constraihts. Class was started and stopped on time without undue pressure to the students.

G = GOOD

Well organized lesson. Time was considered factor; instructor was aware and in control, class started and stopped on time. Lesson was unstrained and orderly.

F = FAIR

Lesson was adequately planned. Instructor was conscious of the time element, and this was somewhat apparent to the students. Class was started and stopped on time.

P = POOR

Lesson was poorly administered. Class was late in starting/ending. Instructor was overly concerned with time or not concerned at all. Lesson was without direction, instructor was hesitant and hurried at times. Students were constantly in turmoil as to what they were required to do.

TRAINEE/STUDENT RESPONSES

EVIDENCE OF STUDENT AND INSTRUCTOR INTERACTION.

E = EXCELLENT

Participation spontaneous; atmosphere created by instructor encouraged student participation; all students eager to take part; students assume responsibility for their own learning; proper balance of student-instructor active participation maintained, consistent with method used.

G = GOOD

Most students willing to participate; only a few students must be cajoled into taking part; excellent balance of student-instructor active participation.

F = FAIR

Student interest and participation aroused; some timid and weaker students not responding; adequate balance of student-instructor active participation, consistent with method used.

P = POOR

Environment created by instructor fails to elicit general interest and participation; many students reluctant to take part; participation obtained by compulsion; instructor depends upon a few aggressive students for reaction; some imbalance in student-instructor active participation.

EVIDENCE OF CLASS INVOLVEMENT.

E = EXCELLENT

Students evidence a high degree of interest in the presentation; attention sustained throughout the period.

G = GOOD

Students interested; students had no difficulty keeping up with instructor.

F = FAIR

Students interested and attentive with only occasional and temporary lapses.

P = POOR

Student interest and attention marginal; lapses in attention frequent and sustained.

EVIDENCE OF ATTAINMENT OF LEARNING OBJECTIVES THROUGH TESTING.

E = EXCELLENT

Uses clear-cut and definite means of determining level of student achievement; tests periodically and thoroughly on student understanding and achievement; difficulties revealed by tests receive immediate attention; remedial teaching exceptionally effective; all indications point to superior achievement of lesson objectives by the class.

G = GOOD

Uses excellent means of determining the extent to which objectives have been achieved; tests periodically on student understanding and achievement; uses good remedial techniques; all learning checks and other observations indicate that lesson objectives have been thoroughly achieved by the class with a few possible exceptions.

F = FAIR

Uses some means of determining extent to which students have learned; utilizes adequate remedial techniques; indications point to satisfactory achievement by most students.

P = POOR

Inadequate testing of student learning; checks made totally ineffective; lesson objective achievement questionable.

CHOICE AND USE OF MEDIA AND/OR RESOURCES/FACILITIES.

E = EXCELLENT

Student response shows understanding of all the objectives and tasks assigned. Utilization of available media/resources and facilities was evident.

G = GOOD

Overall majority of students understood objectives and tasks assigned. Only minor confusion as to media/resources and facilities available in order to complete the objectives or tasks.

F = FAIR

Majority of students gave evidence of not fully understanding what was to be accomplished by the objectives and tasks assigned. Media/resources and facilities available were sparsely utilized.

P = POOR

Overall students were confused as to objectives or tasks to be accomplished. Media/resources and facilities available were not utilized effectively as a direct result of major student confusion.

DEMONSTRATION OF SELF-MANAGEMENT

E = EXCELLENT

All students purposefully occupied on assignment. There was no evidence of a lax attitude on the part of the students.

G = GOOD

Most students occupied on assignment. Some students were observed daydreaming.

F = FAIR

Daydreaming noted during entire period by select students. At times student were somewhat rowdy. Self-management observed to be average.

P = POOR

Much waste of time noted by students. Loafing and/or rowdiness was prevalent throughout the lesson.

INFORMATION SHEET 1.21.1I August 1979

TITLE: INSTRUCTIONAL MEDIA (TRAINING AIDS)

INTRODUCTION:

This information sheet is designed to provide basic information on the preparation and use of instructional media for classroom instruction including flock-cards, flip charts transparencies, audio and visual projectors, instruction sheets and diagrams.

REFERENCES:

1. NAVPERS 92050A, Instructor Training, Part 7
2. Brown, Lewis, Haroleroad, A-V Instruction Materials and Methods, Second Edition.
3. Wittich & Schuller, A-V Materials and Their Use, Fourth Edition
4. NAVTRA 10469-A, Illustrator Draftsman 3&2
5. AFM 50-62, Principles and Techniques Of Instruction

INFORMATION:

A. Purposes of Training Aids

  1. Standardization

    a. Every class will be subjected to the same training aids and will receive the same information.

    b. Ensures that the mental images formed by observation will be similar to and correspond to the actual facts the instructor wants to convey.

    c. Helps to activate the Law of Primacy by ensuring that a student's first learning is correct.

  2. Interest

    a. Student's attention is quickly focused and held upon the subject matter which aids to maintain the students' readiness to learn.

    b. Helps to activate the Law of Intensity by making the subject matter more vivid.

  3. Develop understanding

    a. Simplifies and helps to clarify difficult points of subject matter.

   b. Aids the instructor in reaching the minds of more students through more than one sense channel.

   c. Helps to activate the Law of Exercise due to unchanging repetition.

B. Characteristics of an Effective Training Aid

1. The training aid should be as simple as practical, yet still maintain the desired degree of accuracy in relation to the subject matter.

   a. Realistic in relation to on-the-job use and not distorted.

   b. Simple in relation to the subject matter by displaying only that which is needed.

2. The size, video and sound should be of such that everyone in the class can see and hear.

3. Use color for emphasis.

   a. Actual colors make a training aid more exact.

   b. Aids to make distinction between parts.

4. Training aid should be easily handled and be able to be used throughout the lesson (adaptable).

C. Categories of Training Aids

1. Demonstrative aids - Those aids which the student looks at, listens to, tastes, touches or smells to acquire knowledge.

   EXAMPLES: Flock cards, charts, transparencies, films, Instructional Sheets, Job Sheets, and rotten eggs for the smell of mustard gas.

2. Manipulative aids - Those aids which the student operates and from which skills are acquired, maintained or improved.

   EXAMPLES: Trainers such as ASW tactical, link pilot, ships handling tanks, work sheets, etc.

D. Types of Training Aids, Their Preparation and Techniques for Their Use

1. Three dimensional Training Aids

a. Actual equipment

  (1) Best when practical

  (2) Should be large enough for all to see.

  (3) May have cut-away parts.

b. Models - Built to scale, replicas of object

  (1) Use when actual equipment is too large, too small or isn't avaliable.

  (2) Can be working, non-working, cut-away or transparent.

  (3) Shortens teaching time, provides vivid pictures.

c. Mock-Ups - A three dimensional training aid designed to represent operational equipment.

  (1) Normally not constructed to scale.

  (2) Built to show relationship of parts.

d. Exhibit

  (1) Combination of various training aids.

  (2) Can be a model, sample of work, or damaged parts.

  (3) Comparison of damaged unit to a good unit provides a vivid and lasting impression for students i.e., Foreign Object Damage (FOD) Engine

e. Techniques for use of the three dimensional aids.

  (1) Display the aid at the most appropriate time.

  (2) Position or hold the aid at the proper height and angle.

  (3) Use an appropriate size pointer to direct attention to parts for an adequate length of time.

  (4) Give directions to the students when the aid is individually viewed.

2. Flock Cards

a. Preparation

(1) Use colors that are harmonizing and pleasing to the eye, but avoid unnecessary use of many colors.

(2) Size will depend on the viewing distance of the students.

(3) Shape will depend on the subject matter being presented, yet, still be as simple as practicable.

(4) Methods of fastening will depend on what sur face they will be used on.

EXAMPLE: Magnets on chalkboards with metal backing, flock or sand paper on felt boards.

b. Techniques for the use of flock cards

(1) Display as lesson is developed.

(2) Arrange the cards to provide a pleasing and uncrowded arrangement.

(3) Remove all cards after maximum intensity has been gained.

3. Paper Chart

a. Preparation

(1) First sheet should be a cover sheet.

(2) Place a title on the chart at the top.

(3) All labeling should be horizontal along with being spaced visually rather than mechanically. Letters and numbers should be at least 2 inches.

(4) Use dark colors with light background.

(5) Everyone in the classroom must be able to see the information.

(6) Avoid confusing diagrams.

(7) Don't mix pictorial representations and schematic symbols.

(8) Cheap and easy to make.

b. Techniques for the use of chart(s)

(1) Mount chart(s) on an easel.

(2) Ensure easel lends ease in the use of the chart(s), yet not blocking the chalkboards.

(3) Avoid tapping the chart(s) and making random movement with pointer or hand.

(4) Remove the chart(s) after they have served their purpose.

4. Posters

May be used in a manner similar to pictures and are more frequently displayed over a period of time. Their value lies primarily in the repeated sight of an attention-getting illustration. Posters constitute an effective means of repeating a point for emphasis. One criticism of the poster is that, after several days, trainees lose consciousness of it and often even fail to see it. The more striking the poster in color or format, the longer it will be effective in delivering its message.

5. Charts and Diagrams

They are used to draw the attention of the class to important facts or ideas. They are prepared to show such points as the functions of working parts, the care and servicing of equipment, and the outline of an organization. All charts must be large enough to be seen from all parts of the room and must be clearly illustrated, so that relatively few words of explanation are necessary. Charts and diagrams should be stored or covered when not in use or so arranged that they may be displayed when needed and immediately removed or covered without distracting attention.

6. Pictures

Pictures are used to good advantage in many lessons. They provide an overall view of the object and in many instances they are used in ways similar to slides. Pictures are frequently less suitable than slides because they are not as large as a projected slide. They may be placed about the room and left in view for several days or passed around the class. The instructor may, by the use of a picture, bring to the class interesting related material which is informational, but not sufficiently important to consume class time. Interest may be aroused and attention maintained through the use of pictures.

7. Cartoons

   Cartoons are enjoyed by all students. They produce the desired reaction because they expose the results of incorrect procedure. Students seem to derive pleasure from seeing an imaginary individual placed in an awkward, perplexing, or even impossible situation, especially when the circumstances are caused by the foolish action of the cartoon character. They are particularly effective in teaching safety.

8. Bulletin Board

   a. Made from a wide variety of materials, cork, cardboard, etc.

   b. Available in numerous colors.

   c. Used to display notices, duty rosters, assignments, exhibits, etc.

9. Felt or Flannel boards

   a. Available in a variety of shapes and colors.

   b. May be made from colored felt or flannel on a stiff backing.

   c. Used to develop a topic as the lesson is presented.

   d. The objects can be stuck to the board using felt cutouts, or sandpaper-backed pictures or objects.

10. Magnetic boards

   a. Similar to the felt board in construction and use.

   b. The difference is that the mounting board is covered with a sheet of thin iron plate.

   c. Small magnets or magnetic tape is mounted on the back of the display material to hold it in place.

   d. Magnetic paint is also available and can be brushed on any smooth flat surface to provide a magnetic surface.

e. Chalkboard/VAP may also be used as a magnetic board.

11. Transparencies

a. Preparation

(1) Labeling should be no smaller than the capital letters on a typewriter.

(2) May use more than one transparency.

(3) Can mask areas to develop later in the lesson.

(4) Can be made of various colors.

(5) May show movement by specially developed transparencies, i.e. polarized film.

b. Techniques for the use of transparencies.

(1) Avoid obstructing students' view of the screen and making random motions within the light beam.

(2) Use a pencil or other small pointed object as a pointer and either point to or lay the pointer down on the transparency.

(3) Turn the overhead projector off when not in use.

(4) Polarized transparencies must be displayed on an overhead projector equipped with a polarized attachment.

12. Film Strip

a. Usually strip of film for one subject or topic

b. Shown in manually operated projector

c. Can show one frame at a time

d. Usually has sub-title to read

e. Some come with tapes or records

13. Opaque Projector

a. Used to project any opaque object.

b. Used as a developmental device for other aids.

c. Room must be completely dark.

14. Slide Projector

    a. Used to display slides.

    b. Used by the instructor to show still pictures or images in sequence for any length of time desired.

    c. May be used with or without sound.

    d. Instructor is able to select and arrange slides shown.

    e. Instructor may stop anytime to discuss a slide or series of slides.

15. Audio Recorder and Player

    a. Can be played or recorded at various speeds and on various size reels, or number of tracks. Examples: reel to reel, cartridge, cassette.

    b. Used for selective listening, individualized instruction and with other aids.

    c. Techniques for use

        (1) Pre-set audio, etc.

        (2) Safety precautions must be followed.

        (3) Use speaker system capable of projecting the sound to the rear of the classroom.

16. Movie Projector - Used to show 8mm and 16mm training films for a time oriented display of subject matter.

    a. Pre-set audio and focus.

    b. Elevate projector so that the picture is just above the class.

    c. Introduce the film/film guide.

    d. Explain the major points to look for in the film.

    e. Recap, discuss the major points after the film.

17. Instructional Television/Video Tapes

    a. Used to record skills and real-life situations for playback and review.

    b. To enrich a lesson and heighten students interest and understanding of the subject matter.

    c. Use for supplemental teaching to show selected segments of a lesson demonstrated by an instructor.

        (1) Works good for a large class.

        (2) Monitors must be placed so that the entire class may view the presentation.

    d. Can be used for total teaching when no qualified instructors are available or for specialized subjects.

        (1) Disadvantages: may bore students, students cannot ask questions during telecast, etc.

    e. Useful for self-made presentations.

18. Programmed Instruction

    a. Written by specialized writers.

    b. Used for part of a lesson or course, enrichment, remediation or an entire course or lesson.

19. Techniques common to all training aids

    a. Select and preview

        (1) Check condition

        (2) Become familiar with the training aid - practice using the training aid.

        (3) Check associated equipment to ensure proper operation, i.e. overhead, slide projector.

    b. Keep out of sight until needed

    c. Ensure all can see

    d. Introduce the training aid by discussing the major teaching points to be developed by using the training aid.

e. Remove from sight after use

f. Use pointer when appropriate.

  (1) Arm straight and used as an extention of the body. Hand nearest object to be pointed out should be used. Do not allow arm to cross body.

  (2) Stow pointer when not in use, i.e. place in a chalk tray or hang on hook.

  (3) Do NOT stand in front of training aid.

g. Summarize/recap the information illustrated by using the training aid.

20. Factors to consider when selecting training aids

a. Simple and accurate in relation to subject matter.

  (1) Display only what is needed to convey vital subject matter.

  (2) Must be appropriate to the situation.

b Size related to visibility

  (1) Smallest teachable part should be visable to all.

  (2) Should be easily handled.

c. Nature of subject matter

  (1) Degree of difficulty

d. Level of instruction

  (1) Introductory or advanced

  (2) Class level

e. Quality of training aid

  (1) Very important factor.

  (2) Poor training aid can be worse than no training aid at all.

f. Circumstances for specific use

  (1) Expense

(2) Availability

(3) Complexity

(4) Delicacy

(5) Size

(6) Is danger involved?

g. Use of color

(1) Eye appealing

(2) Used for realism, emphasis and to distinguish parts.

21. Instructional material numbering

a. All learning materials used in a given lesson will be numbered and/or listed on the cover page of the lesson topic guide in the appropriate category.

b. Numbered according to the specific lesson in which the instructional materials are utilized, with an additional numeric/alpha suffix indicating the sequence and type of instructional material.

c. Identifying type letters are:

A - Assignment Sheet
C - Chart
F - Film
FC - Flock Card
I - Information Sheet
J - Job Sheet
N - Notetaking Sheet
S - Slide
T - Tape
W - Work Sheet
XP - Transparency

d. Examples:

1.2.1I
...Information Sheet
...First
...Second Lesson
...First Unit/Phase

3.8.4XP
...Transparency
...Fourth
...Eighth Lesson
...Third Unit/Phase

E. Sources of Training Aids

1. CNTT or CNET (whichever is the next in your chain of command)

    a. Provides funding approval for course Equipment Requirements List (a part of the Curriculum Outline).

    b. Provide technical assistance.

2. Naval Education and Training Support Centers (NETSCLANT and NETSCAPAC) - Supplies aids to the fleet and school commands

    a. Located at San Diego (AV 933-8891) and Norfolk (AV 690-3013)

3. Local Command Training Facilities (TRAFAC's) - training aids library that supports its own command.

    a. United States Film Catalog, NAVPERS 10,000 series.

    b. Training Devices Guide, NAVEXOS P-530-2.

    c. Naval Training Device Center Index of Publications, NAVSO P-1480.

4. School

    a. Training aids library

    b. Supports only the school

5. Salvage and redistribution centers

6. Civilian Manufacturer's

    a. Must be on GSA approved list

    b. Item costing less than $1000 may be purchased through open purchase.

7. Self-made

    a. Limited only by imagination, knowledge, skill and material availability.

F. Instruction Sheets

1. Information sheets - Provides students with supplemental information, diagrams, charts, pictures. (See sample).

2. Assignment sheets - Used for out-of-class activities, requires students to do reading, studying, observing, etc. (See sample).

3. Notetaking sheets - Form with main points of the lesson. Allows student to fill in some notes of his own. (See sample).

4. Job sheet - Tells student how to do job, used during class. (See sample).

SAMPLE INFORMATION SHEET FORMAT

INFORMATION SHEET 4.3.3I NOVEMBER 1976

TITLE: APPROACH POWER COMPENSATOR SYSTEM

INTRODUCTION:

The APC (Approach Power Compensator) system automatically controls engine power to maintain optimum angle of attack during landing approaches. By this means, the pilot can direct most of his attention toward flying the meatball to touchdown.

REFERENCES:

1. NAVAIR 01-45AAE-2-6, Power Plant and Related Systems.
2. NAVPERS 10349-C, Aviation Electrician's Mate 1 & C.
3. NAVAIR 01-45AAA-2-69, Electrical Components A-7E

INFORMATION:

Description - The AN/ASN-54 (V) approach power compensator (APC) system, when engaged by the pilot, automatically controls engine power to maintain the airplane on a 1G glide slope at a preset angle of attack during a landing approach. The system consists of the angle-of-attack transducer, deck compression switch, accelerometer, throttle control computer, electronic control amplifier, electromechanical rotary actuator, APC/radar relay, approach power compensator (APC) system control panel, APC potentiometer, and APC warning light. The panel includes the APC switch, and a temperature selector switch. A system test receptacle is also provided in the left avionics compartment for monitoring of system power and component output signals during a ground test and troubleshooting of the control set.

Operation

NOTE: Use diagrams 1 and 2.

a. The approach power compensator system, when engaged, is energized by a 28 v d-c control circuit from the APC switch to ground through the weight-off-gear contacts of the deck compression switch. Power for the control circuit is furnished from the secondary d-c bus. The system is energized when the APC switch is placed in ON (electrical power on the airplane and weight off the landing gear for ground test).

SAMPLE NOTETAKING SHEET FORMAT

NOTETAKING SHEET 1.2.1N MARCH 1977

TITLE: THE THREE TYPES OF BURNS

Subtitle: (if required)

REFERENCE(S):

1. NAVPERS 10523-A, Hospital Corpsman 3 & 2, Chapter 9.

NOTETAKING OUTLINE:

A. The three types of burns
    1. First degree burn
        a. Characteristics

        b. Treatment

    2. Second degree burn
        a. Characteristics

        b. Treatment

    3. Third degree burn
        a. Characteristics

        b. Treatment

SAMPLE ASSIGNMENT SHEET FORMAT

ASSIGNMENT SHEET 1.3.1A JUNE 1978

TITLE: THE THREE TYPES OF BLEEDING

INTRODUCTION:

The purpose of this sheet is to familiarize the student with the basic knowledge of the three types of bleeding, their characteristics and the treatment of each type. Once this has been mastered, the student will learn some additional principles and techniques that are useful and important in specific circumstances. It is therefore important first to know the basic principles and then to know when and how to modify them if necessary.

LESSON TOPIC LEARNING OBJECTIVES:

1.3.1 The student will list the three types of bleeding, from memory, without error.

1.3.2 The student will match the three types of bleeding to their characteristics and treatments, given columns of each, without error.

STUDY ASSIGNMENT:

Read Chapter 5, pages 75 through 86 in NAVPERS 10523A, Hospital Corpsman 3 & 2. Study this chapter carefully and answer the following questions. Write your answers in the spaces provided. Turn in completed assignment to __________ at ________.

STUDY QUESTIONS:

1. ____

2. ____

3. ____

etc.

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SAMPLE NOTETAKING SHEET FORMAT

NOTETAKING SHEET 1.2.1N MARCH 1977

TITLE: THE THREE TYPES OF BURNS

Subtitle: (if required)

REFERENCE(S):

1. NAVPERS 10523-A, Hospital Corpsman 3 & 2, Chapter 9.

NOTETAKING OUTLINE:

A. The three types of burns
    1. First degree burn
        a. Characteristics
        b. Treatment
    2. Second degree burn
        a. Characteristics
        b. Treatment
    3. Third degree burn
        a. Characteristics
        b. Treatment

SAMPLE JOB SHEET FORMAT
(MENTAL SKILL)

JOB SHEET 1.4.1J

MAY 1978
TIME: 1 Hour

TITLE: HOW TO SOLVE FOR TOTAL CAPACITANCE OF A SERIES/PARALLEL CIRCUIT

Subtitle (if required)

INTRODUCTION:

The purpose of this job sheet is to guide the student in a problem solving exercise which requires them to solve for total capacitance in a series/parallel circuits. This skill will aid the student in performing their assigned duties at their next command, also in associated lessons in this electronics course.

LESSON TOPIC LEARNING OBJECTIVE(S):

1.4.1 Given a problem sheet and a calculator, the student will SOLVE for total capacitance in series/parallel circuits. Four of 5 problems must be answered correctly.

REFERENC_(S):

1. Allen, Joseph, Basic Electricity, Chapter 4.

EQUIPMENT AND MATERIALS:

1. Problem sheet
2. Calculator

JOB STEPS:

A. Solve for capacitance
    1. Write formula
    2. Substitute values
    3. Perform addition
    4. Perform multiplication

5. Perform division

6. Perform addition

7. Write answer.

INSTRUCTOR VERIFICATION ____________
INITIALS

SELF-TEST ITEMS:

1. Write the formula for total capacitance in a series circuit ________________.

2. Write the formula for total capacitance in a parallel circuit ________________.

INSTRUCTOR VERIFICATION ____________
INITIALS

SAMPLE JOB SHEET FORMAT
(PHYSICAL SKILL)

JOB SHEET 1.18.1J

APRIL 1978
TIME: 0.5 Hours

TITLE: HOW TO ADMINISTER AN INTERMUSCULAR INJECTION

Subtitle (if required) ____________

INTRODUCTION:

The purpose of this sheet is to guide the students in a practical work assignment which requires them to administer a intermuscular injection according to the exact steps of procedure. This skill will provide the student with the basic knowledge and skill to be used while assigned to the ward and on more complex injections in associated lessons.

LESSON TOPIC LEARNING OBJECTIVE(S):

1.8.1 Given the necessary materials, the student will ADMINISTER an intermuscular injection IAW NAVPERS 10523-A, Hospital Corpsman.

REFERENCE(S):

1. NAVPERS 10523-A, Hospital Corpsman 3 & 2, Chapter 15.

EQUIPMENT AND MATERIALS:

1. Cotton swabs
2. Alcohol
3. Disposable needle and syringe

JOB STEPS:

PRECAUTION(S): Be sure your hands are clean

A. Administer an intramuscular injection
    1. Inspect content of vial and clean top
    2. Remove protective covering from syringe and needle
    3. Check for burs on needle
    4. Draw injection from vial
    5. Clean injection site with alcohol

INSTRUCTOR VERIFICATION ____________
Initials

6. Reassure patient, have him relax
7. Administer injection

INSTRUCTOR VERIFICATION ____________
INITIALS

SELF-TEST ITEMS:

1. Why should the needle be rubbed through an alcohol swab before administering the injection?

2. Why should you try to relax the patient before administering the injection?

INSTRUCTOR VERIFICATION ____________
INITIALS

INFORMATION SHEET 1.22.1I August 1979

TITLE: SPECIFIC REQUIREMENTS FOR THE 30-MINUTE PRACTICE TEACHING EXERCISE LESSON #2.

INTRODUCTION:

The purpose of this information sheet is to outline the requirements necessary for satisfactory performance of a 30-minute practice teaching exercise.

REFERENCE:

1. Instructor Training Course A-012-0011

INFORMATION:

A. Specific Requirements

1. Select a topic (DO NOT select a topic on sex, religion, politics, or anything that could be dangerous to the human element. When in doubt obtain staff instructor approval first.
    a. Knowledge only is to be taught.

2. Write a terminal objective (there is no requirement for the terminal objective to be met). Information sheet 1.5.1I applies.

3. Write a minimum of one enabling objective that supports the terminal objective (approximately 19-24 minutes of teaching material is required). Enabling objectives must be satisfied by the lesson topic. Information sheet 1.5.1I applies.

4. Write a criterion test item for each enabling objective contained in the lesson topic.
    a. Use the appropriate section of the LOAW sheet.
    b. Information sheet 1.18.1I applies.
    c. Administration of test not required. Tests item(s) must be checked and approved by a staff instructor during the lab period.
    d. Format:
        (1) Use a plain sheet of paper
        (2) Heading
            (a) Progress Check
            (b) A-012-0011T
        (3) Number items the same as the enabling objectives.

5. Perform an objective analysis for the enabling objective(s) to determine major and minor tracking points. Information sheet 1.8.1I applies.

6. Develop a lesson topic guide (two copies) in accordance with information sheet 1.9.1I.
   a. Cover Page
      (1) Provide for all entries except for homework which will be "NONE."
      (2) Criterion Test will be listed as "Progress Check A-012-0011T1."
   b. Lesson topic elements
      (1) Introduction
      (2) Presentation
      (3) Summary
      (4) Application
      (5) Evaluation
      (6) Assignment

7. Develop or procure a training aid to support the accomplishment of the learning objective(s). The training aid may be a transparency, chart, poster, flock card, etc. List on cover page.

8. Annotate the lesson topic guide in accordance with information sheet 1.10.1I.

9. Method of instruction: Illustrated Lecture Method.

10. Instruct a 30-minute practice lesson using the chalkboard/VAP and at least one other training aid to teach a knowledge only type subject matter.

B. Guidelines for Instructing the 30-Minute Practice Lesson

1. Introduction must include the following areas and be presented in the prescribed order:
   a. Establish Contact
   b. State the Lesson Objectives
      (1) Stated and displayed
      (2) Can be placed on CB or listed on a handout.
   c. Establish Readiness
      (1) Motivating statements
      (2) Lesson Overview (stated and displayed)
         (a) Lesson Topic
         (b) Major Teaching Points
            1. List

RECOMMENDED TIME FOR AN EFFECTIVE INTRODUCTION: 3-5 MINUTES

2. Presentation
   a. Present an organized lesson using good oral delivery techniques, examples and explanations.
   b. Effectively use the chalkboard/VAP and an additional training aid to develop the lesson as it progresses.
   c. Use effective oral questions and questioning techniques to maintain good class participation. Oral questions must be asked throughout the lesson.

RECOMMENDED TIME FOR AN EFFECTIVE PRESENTATION: 19-24 MINUTES

3. Summary
   a. State the lesson objective(s).
   b. Briefly summarize each major teaching point.
   c. Use the chalkboard/VAP and other training aids as appropriate to summarize the lesson.

4. Application - NONE

5. Evaluation
   a. Check for understanding
      (1) Ask six thought-provoking questions of the class to check for understanding of the lesson topic. List questions and answers in Outline of Instruction Column.
      (2) If students are unable to answer the questions reteach as necessary.
   b. Complete Progress check A-012-0011T1.

6. Assignment - NONE

RECOMMENDED TIME FOR THE SUMMARY, APPLICATION, EVALUATION AND ASSIGNMENT: 3-6 MINUTES

THE ENTIRE LESSON SHOULD BE COMPLETED WITHIN 25-35 MINUTES

C. Instructional Materials Development Checklist for Practice Teaching Lesson #2:

1. Prior to your practice teaching lesson date, you are required to have the following items checked and approved by a staff instructor.

CHECKLIST	STAFF INSTRUCTOR/DATE
a. Topic.	______________________
b. Terminal Objective	______________________
c. Enabling Objective(s).	______________________
d. Criterion Test Item(s)	______________________
e. Objective Analysis	______________________
f. Lesson Topic Guide	______________________
g. Annotated Lesson Topic Guide .	______________________
h. Copy of Other Developed Material, if applicable. . . .	______________________

2. The following items must be provided to the staff evaluator just prior to presenting your practice lesson;

   a. Instruction Materials Development Checklist

   b. Copy of the Lesson Topic Guide

   c. Copy of Additional Materials, if applicable. (i.e., information sheets, etc.)

REMEMBER THAT PERFECTION IS ACHIEVED THROUGH PRACTICE. SPACES ARE AVAILABLE FOR YOUR USE TO PRACTICE THE LESSON PRIOR TO PRESENTING IT FOR FORMAL EVALUATION.

INFORMATION SHEET 1.23.1I August 1979

TITLE: LEARNING OBJECTIVE ANALYSIS (SKILL)

INTRODUCTION:

Through time it has become evident that students experience difficulty in developing teaching points to support objectives. The question asked is "where do I start?" An objective analysis is a process used to develop major and minor teaching points in support of a learning objective. The purpose of this information sheet is to define/format an objective analysis. Proper use of the data provided will allow effective analysis of learning objectives by breaking down the objective into small incremental parts for teaching. An objective analysis will be required for each learning objective used in lesson topic guide development for practice teaching lessons.

REFERENCE:

1. Instructor Training Course A-012-0011

INFORMATION:

A. Objective Analysis (Physical/Mental Skill)

1. In this analysis the major and minor teaching points must likewise be determined but different terminology is used. Use the Action Verb as the major teaching point. Necessary modifiers may be used for clarification.

2. Recommended process is to perform the skill in its entirety, writing down everything in the performance. Be specific remembering the students have never before performed the skill. During the process list all the tools/equipment required in the performance of the skill as well as any safety precautions or notes. Refer to page 1.23.1.4 for the correct format for listing precautions/notes.

3. Using the list generated in 2 above separate the list into WHAT (steps required to perform skill) and HOW (knowledge/skill factors necessary) sequence, so that each WHAT has HOW supporting points (if not self-evident). The instructor will teach the entire skill, then provide the student with a list of WHAT to do steps and the student must remember the HOW from the lesson presentation.

4. The WHAT and HOW sequence provides the data for the Presentation section of the lesson topic guide.

5. The WHAT column will also provide the data for the job steps on the JOB SHEET that must be provided for each skill lesson. Remember the Job Sheet should contain sufficient data to guide the student through the skill. Refer to information sheets 1.21.1I and 1.23.1I for sample job sheets.

6. Compound skill objectives may also be taught. You may use one teaching point or separate into two or more teaching points. Refer to page 1.23.1.4 for sample compound skill objective analysis.

Format (skill only)

OBJECTIVE ANALYSIS (SKILL)

OBJ ____________________________

WHAT	HOW
A. Teaching point	
1. (Steps)	a. b. c.
2.	a.
3.	a. b.
4.	a.

7. FORMAT (Knowledge and Skill Combination) - Simply combine the process for knowledge and skill objective analysis.

OBJECTIVE ANALYSIS

OBJ (Knowledge)

OBJ (Skill)

MAJOR	MINOR
A. Teaching Point #1	1.
	2.
	a.
	b.
	3.
	a.

WHAT	HOW
B. Teaching Point #2	
1. (Steps)	a.
	b.
2.	a.
3.	a.
	b.

OBJECTIVE ANALYSIS

6.10.1 Disassemble, replace disc and reassemble a 1½" globe valve when given the necessary tools, materials and a job sheet. The job sheet procedures must be followed with 100% accuracy and the valve must have zero leakage past the disc when hydro tested to 150 lbs. on a test stand.

WHAT	HOW
A. Disassemble	
1. Open valve	a. Turn handwheel counter-clockwise
2. Back valve off ½ to ¼ turn	a. Turn handwheel clockwise
3. Loosen and remove bonnet	a. Using a 15" ford wrench
CAUTION: Ensure wrench is adjusted properly to prevent the nut from rounding off or injury from wrench slipping.	b. Remove bonnet assembly by pulling up vertically
CAUTION: Tolerances are fairly close, do not jam by cocking assembly.	
4. Remove disc assembly from stem	a. Hold bonnet and disc assembly steady and rotate handwheel clockwise approximately 1¼ to 1 3/4 turns. Disc can then be removed.
CAUTION: Do not drop disc as damage could result to guide lands or your toe.	b. Rotate bonnet vertically and place out of the way on the bench.

B. Disc Replacement

1. Disassemble disc assembly	a. Place special tool H-704 in stem slot and hold in vertical position.
	b. Loosen disc nut using 3/4" box end wrench. Turn clockwise.
CAUTION: Do not drop nut or disc	c. Remove disc nut and disc
2. Replace disc	a. Place new disc on disc assembly
	b. Screw disc nut on, turning in a clockwise direction
	c. Tighten disc nut snug

C. Reassemble

1. Place disc assembly back on bonnet	a. Slide disc assembly on stem
	b. Rotate handwheel counterclockwise approximately 1¼ to 1 3/4 turns
2. Replace bonnet assembly	a. Slide disc and bonnet assembly into valve body by holding bonnet nut clear and bonnet assembly in the vertical position
	b. Thread on bonnet nut by turning clockwise.
	c. Tighten snug using a 15" ford wrench
3. Close valve	a. Turn clockwise until snug.

LESSON TOPIC GUIDE
INSTRUCTOR DEVELOPMENT TRAINING DIVISION
NAVAL AIR TECHNICAL TRAINING CENTER
MILLINGTON, TENNESSEE 38054

DATE: August 1979

COURSE TITLE: SHIPS MAINTENANCE (MECHANICAL) COURSE B-702-0011

LESSON TOPIC: 6.10 GLOBE VALVE REPAIR

CLASSIFICATION: For Official Use Only

ALLOTTED LESSON TIME: Class 1.0 Periods
Lab 2.0 Periods

INSTRUCTIONAL MATERIALS:

Instructional References:

1. Stanton, M.K., Valve Repair Procedures.
2. Daily, I. P., Plumbing Procedures Chapter 4, pps 44-78.

Instructional Aids:

Training Equipment

1. Globe valve 1¼"
2. Open end and box end wrench 3/4"
3. Special tool #H-704
4. Ford wrench 15"
5. Valve stand
6. Replacement disc

(SAMPLE ONLY)

Texts:

1. Wet, I.M., Home Repairs.
2. Door, W. T., National Code Book (Plumbing).

Instruction Sheets:

1. 6.10.1J Globe Valve Repair

TERMINAL OBJECTIVE:

6.0 Disassemble, repair and reassemble various valves. Job step procedures must be followed with 100% accuracy and each repaired valve must have zero leakage when hydro tested to its applicable pressure.

ENABLING OBJECTIVE:

6.10.1 Disassemble, replace disc and reassemble a 1¼" globe valve when given the necessary tools, materials and a job sheet. Job sheet procedures must be followed with 100% accuracy and the valve must have zero leakage past the disc when hydro tested to 150 lbs. on a test stand.

CRITERION TEST: Performance Test B-702-0011T3

HOMEWORK: NONE

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
I. INTRODUCTION		
A. Establish Contact 1. If first meeting with the class then introduce yourself. 2. Give any background on yourself that might be of interest. 3. After the first meeting a simple "good morning/afternoon" might be sufficient.		
B. State Lesson Objectives 1. State and display the TO EO's for the lesson topic. 2. May be placed on chalkboard/VAP, student handouts or contained in the student guide.	Turn to cover page of LTG and read objectives	
C. Establish Readiness 1. Motivating statements a. Develop interest in lesson topic b. How will the student use the lesson material? c. Why does the student need to know the lesson material? d. Class must be motivated before meaningful learning can take place.		✓

1.23.1.7

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
2. Lesson overview a. Lesson Topic; GLOBE VALVE REPAIR	State and Display on Chalkboard/VAP	
b. Major Teaching Points: (1) Disassemble (2) Disc Replacement (3) Reassemble		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
II. PRESENTATION		
A. Disassemble	Using 1¼ globe valve perform step 1 of the four step tech.. Remember: Position students. Position training aid. Do steps slowly. Tell and do simultaneously. Stress safety precautions. Pause after each step and ask questions to check for student comprehension.	
1. Open valve		
a. Turn handwheel counter-clockwise		
2. Back valve off ¼ to ½ turn	Ask why?	Ans: Keep from jamming stem.
a. Turn handwheel clockwise		
3. Loosen and remove bonnet		
a. Using a 15" ford wrench		

1.23.1.9

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
CAUTION: Ensure wrench is adjusted properly to prevent the nut from rounding off or injury from wrench slipping		
b. Remove bonnet assembly by pulling up vertically		
CAUTION: Tolerances are fairly close, do not jam by cocking assembly		
4. Remove disc assembly from stem		
a. Hold bonnet and disc assembly steady and rotate handwheel clockwise approximately 1½ to 1 3/4 turns. Disc can then be removed from stem	Ask: What could happen if we didn't hold steady?	Ans: Could drop disc and damage the guide lands or toe.
CAUTION: DO NOT DROP DISC AS DAMAGE COULD RESULT TO GUIDE LANDS OR YOUR TOE.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Rotate bonnet vertically and place out of the way on bench	Ask: Why do we place out of the way?	Ans: To prevent accidental droping of bonnet.
B. Disc Replacement		
1. Disassemble disc assembly		
a. Place special tool H-704 in stem slot and hold in vertical position.	Demonstrate holding in vert position with tool in place	
b. Loosen disc nut using a 3/4" box/end wrench. Turn counter clockwise		
c. Remove disc nut and disc		
CAUTION: Do not drop nut or disc		
2. Replace disc		
a. Place new disc on disc assembly		
b. Screw disc nut on, turning in the clockwise direction	Ask: What should we be careful of at this point?	Ans: Cross-threading.

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
c. Tighten disc nut snug using 3/4" box/end wrench	Ask: Why do we tighten snug?	Ans: Strip threads or round off nut.
C. Reassemble		
1. Place disc assembly back on bonnet		
a. Slide disc assembly on stem		
b. Rotate handwheel counter-clockwise approximately 1½ to 1 3/4 turns	Ask: Why?	Ans: Prevent disc body from sliding off stem.
2. Replace bonnet assembly		
a. Slide disc and bonnet assembly into valve body by holding bonnet nut clear and bonnet assembly in the vertical position	Exp: this ensures seating of bonnet in body.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
b. Thread on bonnet nut by turning clockwise		
c. Tighten snug using a 15" for wrench	Ask: What caution should we be mindful of here?	
3. Close valve		
a. Turn clockwise until snug	Stress why we don't over-tighten valve when closing (damages disc). Perform Instructor Repetition and/or Instructor/Student Repetition Step if appropriate. Perform one option of the student demonstration step - individual student, coach and pupil or group performance.	

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
III. Summary		
A. State lesson objectives	Turn to cover page and read the lesson objectives.	
B. Major Teaching Points	Briefly summarize the teaching points.	
1. Disassemble		
2. Disc replacement		
3. Reassemble		
IV. APPLICATION		
A. Pass out and review job sheet.	Give safety review. Give directions on how, what, where and why skills being accomplished.	
B. Verify self-test.		
C. Assign tools, equipment and work space.		
D. Supervise student activity.		

OUTLINE OF INSTRUCTION	INSTRUCTOR ACTIVITY	STUDENT ACTIVITY
V. EVALUATION		
A. Check for understanding Provide a list of (3) three questions and answers.	Ask thought-provoking questions to check student understanding of the lesson topic.	
B. Performance test will be administered on __(date)		
VI. ASSIGNMENT - NONE		

CAUTION: Tolerances are farily close, do NOT jam by cocking assembly.

4. Remove disc assembly from stem

CAUTION: Do NOT drop disc as damage could result to guide lands or your toe.

INSTRUCTOR VERIFICATION - ______________
Initial

B. Replace disc

1. Disassemble disc assembly

CAUTION: Do NOT drop nut or disc

2. Replace disc

INSTRUCTOR VERIFICATION - ______________
Initial

C. Reassemble

1. Place disc assembly back on bonnet

2. Replace bonnet assembly

3. Close valve

INSTRUCTOR VERIFICATION - ______________
Initial

SELF TEST

1. Why should the ford wrench be properly adjusted when removing the bonnet? ______________

____

____

2. Why should the bonnet NOT be cocked during removal?

____

____

____

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TITLE: METHODS/TECHNIQUES OF INSTRUCTION (SKILL)

INTRODUCTION:

The purpose of this information sheet is to provide you with the information necessary to construct and utilize a Skill Lesson Topic Guide during practice teaching session number three. The knowledge gained writing and giving a skill lesson will be invaluable to you when you leave here and teach your own classes.

REFERENCES:

1. NAVPERS 16103-C, Manual for Navy Instructors.
2. NAVPERS 92050, Instructor Training Excerpts from Naval Training Bulletin.
3. AF Manual 50-62, Principles and Techniques of Instruction.

INFORMATION:

A. Types of Skill Lessons

   1. Mental - the active mental processes that calls for rapid accurate, and expert perform ance of a task such as identifying, classifying, applying rules and problem solving.

      a. Convert Fahrenheit to centigrade.

      b. Calculate voltage drop.

      c. Compute miles per hour.

      d. Determine length of an emergency antenna.

      e. Classify action verbs.

      f. Identify job steps

   2. Physical - physical/manual manipulative activity that requires movement of some of the muscles of the body which are directly observable.

      a. Whip a line.

      b. Adjust distributor points.

      c. Replace battery in battle lantern.

d. Don a life jacket.

B. Job Sheet Structure. Job sheets shall conform to the format of Information Sheets 1.21.1I, page 16/17 and 1.23.1I, pages 16/17. Where appropriate, provisions shall be made for the instructor's initials and date to indicate satisfactory completion of the specific task or duty during student performance. Job sheets contain the following:

1. Heading: Identifies the specific Job Sheet.

2. Introduction: A brief state ment of the purpose, scope, and value of the job sheet and suggested completion time used to motivate the student to perform the skill.

3. Lesson Topic Learning Objectives: The enabling objective(s) to be accomplished by the student through completion of the job.

4. References: Complete identification of all publications referenced in the job steps.

5. Equipment and Materials: A listing of all equipment, tools and materials necessary for the performance of the job steps.

6. Job Steps: Detailed procedures for performing assigned task on the system/equipment. If the job steps contained in the technical documentation used in the course are of sufficient detail, reference shall be made to the applicable section/page to perform them rather than reproducing them in this section.

   a. Transfer "what" column from learning objective analysis.

7. Cautions to be Observed During Accomplishment of This Job: Cautions pertaining to personnel or equipment safety are listed in the step where a potential hazard exists. NOTE: is used in the step where specific information is called to the attention of the student.

8. Self-Test Items: Thought-provoking questions on the performance of the job steps. Given as an "open book" test, they permit the student to use information in the technical manual and other course material in arriving at the solutions, and are designed to measure the student's understanding of the procedures.

a. Initialed by instructor.

9. List the Job Sheet under INSTRUCTIONAL MATERIALS on the cover page in Instructional Sheets section.

EXAMPLE:

INSTRUCTIONAL SHEETS

1. 1.3.1J Camera Repair

C. Demonstration Performance Method

1. Instructor Demonstration step (Required)

a. Position students and training aids.

b. Instructor shows and does each step slower than normal in a step-by-step sequence.

(1) Telling and doing should be done simultaneously.

(2) Do not hurry steps of operation.

(3) Repeat difficult operations.

(4) Pause briefly after each operation.

(5) Instructor may use a well versed student or instructor to assist if necessary.

(6) Observe SAFETY PRECAUTIONS and stress key points.

(7) Ensure visibility of materials by all students.

(8) Ask questions throughout step to check student comprehension.

(9) Use proper terminology.

2. Instructor Repetition Step (Optional)

a. Normally only required for physical skills.

b. Purpose is to show the students continuity of operation and to set standards of ease, speed and accuracy of job performance.

(1) Introduce instructor repetition step to class.

(a) Allow discussion of repetition step only after step is completed.

(2) Perform the job with the proper degree of ease, speed and accuracy.

(a) Should be in accordance with conditions and standards of objective.

(b) Streamline oral explanations so that speed of performance will not be slowed.

(c) Follow all safety precautions.

(d) Allow students to ask questions at conclusion of step.

(e) Repeat step as necessary.

3. Instructor/Student Repetition Step (Optional)

a. Can be used for physical or mental skills.

b. Introduce step to class.

c. Instructor selects students who tell the instructor what to do and instructor does each step.

d. Students must include key points, safety precautions, and proper sequence of doing job.

e. Instructor may ask questions during this step.

f. Especially useful when teaching a dangerous or complex skill, or in dealing with expensive or delicate equipment.

4. Student Demonstration Step (one of three options required)

a. Individual student

(1) Introduce step to entire class.

(2) Tell nature of step.

(3) Explain what student must do.

(4) If mental skill, tell the student the problem to be solved.

(5) Call average student to front of classroom.

    (a) Where to stand.

    (b) Give specific directions.

    (c) Put student at ease.

(6) Student repeats the job steps.

(7) Instructor supervises and corrects errors in a constructive fashion, but should allow the student an opportunity to correct his/her own errors.

(8) Mental skills student can perform at seats by providing sample problems.

b. Coach and Pupil

(1) Pair students off or put them in small groups.

(2) May designate one coach and one pupil.

(3) Pupil performs job.

(4) Coach corrects errors.

(5) Instructor supervises

(6) Useful in teaching dangerous or fragile skills.

(7) Students reverse roles and complete job again.

c. Group Performance

(1) Rearrange class if necessary.

(2) Introduce step to class.

(3) Issue materials.

(4) Instructor does each step slowly explaining

    (a) What to do

    (b) How to do it

    (c) Stress safety

(5) Students follow instructor by doing each step after the instructor does it.

(6) Instructor ensures each step is accomplished, then does next step.

(7) Instructor should ask questions, supervise and correct errors.

(8) Especially useful when teaching a dangerous or complex skill, or in dealing with expensive or delicate equipment.

NOTE: The techniques of teaching skills are extremely versatile and highly effective. The number of steps employed may vary depending on the skill difficulty and ability level of the students.

D. Delivery Techniques

1. Introduction

a. Establish Contact

b. State Lesson Objectives

c. Establish Readiness

(1) Motivating statements

(2) Lesson Overview

(a) Lesson - state and display.

(b) Major teaching points - state and display.

2. Presentation

a. Knowledge portion of a skill lesson, if required.

(1) Taught prior to teaching the skill.

(2) Must be related to skill being taught.

(3) Presented as a knowledge subject using the illustrated lecture method.

b. Present Instructor Demonstration Step

c. If appropriate, present instructor repetition step and/or instructor/student repetition step.

d. Present at least one option of the student demonstration step.

  (1) Individual student.

  (2) Coach and pupil.

  (3) Group performance.

e. Common pit falls of teaching a skill

  (1) Avoid talking/teaching to the training aids.

  (2) Be sure each student is able to see the skill being performed. Re-position students if necessary.

  (3) Be sure the training aids are of appropriate size to demonstrate skill, may need a model or mock-up.

  (4) Remember students do not know how to perform the skill, therefore, be sure to demonstrate all steps very slowly.

  (5) Move L.T.G. to training aids to insure complete coverage.

3. Summary

  a. State the lesson objectives.

  b. Summarize each major teaching points.

    (1) Use training aids as appropriate.

4. Application

  a. Pass out and review job sheet.

    (1) Have students read over job sheet as it is introduced by the instructor.

    (2) Have students take the self-test.

  b. Verify self-test

    (1) Instructor initials if questions are answered correctly.

  c. Assign tools, equipment and work space.

(1) Simulated while in I.B.C.

(2) Normally will take place in the laboratory.

d. Supervise student activity.

NOTE: White in I.B.C., sections "c" and "d" will be simulated.

NOTE: Skill lessons are not realistic at I.B.C but format must be learned to apply later at individual schools.

5. Evaluation

a. Check for understanding

(1) List and ask three thought-provoking questions to check student understanding of lesson topic.

(2) Reteach as necessary.

b Performance Test A-012-0011T3 will be given __(Date)________.

6. Assignment

a. As required for this lesson or to prepare for the next lesson topic.

b. Display on C.B./VAP.

INFORMATION SHEET 1.25.1I August 1979

TITLE: SPECIFIC REQUIREMENTS FOR THE 30-MINUTE PRACTICE TEACHING EXERCISE LESSON #3

INTRODUCTION:

The purpose of this information sheet is to outline the requirements necessary for satisfactory performance of a 30-minute practice teaching exercise.

REFERENCE:

1. Instructor Training Course A-012-0011

INFORMATION:

A. Specific Requirements

1. Select a topic (DO NOT select a topic on sex, religion, politics or anything that could be dangerous to the human element). When in doubt obtain staff instructor approval first. Mental or physical skill only.

2. Write a terminal objective (there is no requirement for the terminal objective to be met). Information sheet 1.5.1I applies.

3. Write an enabling objective (skill) that supports the terminal objective. The enabling objective must be satisfied by the lesson topic. Information sheet 1.5.1I applies.

   a. Must be a performance that contains well defined steps of procedure.

   b. Approximately 16-21 minutes of teaching material is required.

4. Perform an objective analysis for the enabling objective to determine what and how teaching points. Information sheet 1.23.1I applies.

5. Develop a lesson topic guide (two copies) in accordance with information sheet 1.9.1I.

   a. Cover page

      (1) Provide for all entries except for homework which will be "NONE."

(2) Criterion test will be "performance test A-012-0011T2."

b. Lesson topic elements

(1) Introduction

(2) Presentation

(3) Summary

(4) Application

(5) Evaluation

(6) Assignment

6. Develop or procure any necessary training aids to support the accomplishment of the learning objective.

a. Recommend a three-dimensional training aid for a physical skill lesson.

b. List on cover page.

7. Develop a Job Sheet for student use in demonstrating the skill. Information sheets 1.21.1I and 1.24.1I will be used in application element of L.T.G. list on cover page.

8. Annotate the lesson topic guide in accordance with information sheet 1.10.1I.

9. Method of instruction: Demonstration Performance Method (Information Sheet 1.24.1I applies).

a. Instructor Demonstration Step - REQUIRED.

b. Instructor Repetition Step - OPTIONAL

c. Instructor/Student Repetition Step - OPTIONAL

d. Student Demonstration Step - (ONE MUST BE USED)

(1) Individual student.

(2) Coach and pupil.

(3) Group performances.

10. Instruct a 30-minute practice lesson using any necessary training aids to teach a skill type subject matter.

B. Guidelines for Instructing the 30-Minute Practice Lesson

1. Introduction must include the following areas and be presented in the prescribed order:

    a. Establish Contact

    b. State the Lesson Objectives

        (1) Stated and displayed

        (2) Must be placed on chalkboard or listed in a handbook.

    c. Establish Readiness

        (1) Motivating statements

        (2) Lesson Overview (stated and displayed)

            (a) Lesson topic.

            (b) Major Teaching Points

                1 List

RECOMMENDED TIME FOR AN EFFECTIVE INTRODUCTION: 3-5 MINUTES

2. Presentation

    a. Present an organized lesson using good oral delivery techniques, examples, explanations, analogies and associations.

    b. Effectively use the chalkboard/VAP and an additional training aid to develop the lesson as it progresses.

    c. Use effective oral questions and questioning techniques to maintain good class participation. Oral questions must be asked throughout the lesson.

    d. The Instructor Demonstration Step must be used. Additionally you are required to use at least one of the options of the Student Demonstration Step. (See A-9 above).

RECOMMENDED TIME FOR AN EFFECTIVE PRESENTATION 16-21 MINUTES

3. Summary

    a. State the lesson objective(s).

b. Briefly summarize each major teaching point.

c. Use the chalkboard/VAP and other training aids as appropriate to summarize the lesson.

RECOMMENDED TIME FOR AN EFFECTIVE SUMMARY: 2-3 minutes

*4. Application

a. Pass out and review job sheet.

(1) Have students answer self-test questions.

b. Verify self-test.

(1) Instructor initials self-test if questions are answered correctly.

c. Assign tools, equipment and work spaces.

d. Supervise student activity.

e. The students will not be required to execute the EO. Due to time constraints this only applies while attending Instructor Training.

RECOMMENDED TIME FOR AN EFFECTIVE APPLICATION: 2-3 MINUTES

5. Evaluation

a. Check for understanding.

(1) Ask three thought-provoking questions of the class to check for understanding of the lesson topic. List questions and answers in the outline of instruction column.

(2) If students are unable to answer the questions, reteach as necessary.

b. Complete Performance Test A-012-0011T2.

6. Assignment--None.

RECOMMENDED TIME FOR THE EVALUATION AND ASSIGNMENT: 2-3 MINUTES

THE ENTIRE LESSON SHOULD BE COMPLETED WITHIN 25-35 MINUTES

*Sections c and d. Simulated only while attending the Instructor Training Course. In actual practice this would be the laboratory session where the students would demonstrate their proficiency of the skill. List items a-d in L.T.G.

C. Instructional Materials Development Checklist for Practice Teaching Lesson #3:

1. Prior to your practice teaching lesson date you are required to have the following items checked and approved by a staff instructor.

CHECKLIST	STAFF INSTRUCTOR/DATE
a. Topic.	____________________
b. Terminal Objective	____________________
c. Enabling Objectives.	____________________
d. Objective Analysis	____________________
e. Job Sheet	____________________
f. Lesson Topic Guide	____________________
g. Annotated Lesson Topic Guide . .	____________________
h. Copy of Other Developed Material if used	____________________

2. The following items must be provided to the staff evaluator just prior to presenting your practice lesson;

   a. Instruction Material Development Checklist

   b. Copy of the Job Sheet

   c. Copy of the Lesson Topic Guide

   d. Copy of additional materials, if used.

REMEMBER THAT PERFECTION IS ACHIEVED THROUGH PRACTICE. SPACES ARE AVAILABLE FOR YOUR USE TO PRACTICE THE LESSON PRIOR TO PRESENTING IT FOR FORMAL EVALUATION

INFORMATION SHEET 1.26.1I August 1979

TITLE: GUIDANCE/COUNSELING

INTRODUCTION:

The primary job for any instructor is to instruct in the subject matter to which he has been assigned. He may also be involved in updating the curriculum as necessary.

Another very vital area for the instructor is in counseling his students in order to cut down on the problems that could happen in the classrooms. This information sheet contains the definition and purposes of in counseling, the types of problems, guidelines for problem identification, approaches to counseling, procedures for conducting a counseling session and some general information on Academic Boards.

REFERENCES:

1. NAVEDTRA 110, Procedures for Instructional Systems Development
2. NAVEDTRA 20058B, Human Behavior and Leadership
3. AF Manual 50-62, Principles and Techniques of Instruction, Ch. 3
4. Rogers, Carl, Counseling and Psychotherapy, Ch. 5-7
5. Waters, Jane, Techniques of Counseling, Ch. 17

INFORMATION:

A. Definition and Purpose of Counseling

Definition - A process in which one individual (counselor) assists another (counselee) in solving a problem with which he/she has been confronted.

Purpose - Assist students in solving their problems so that they are able to complete training.

B. Types of Student Problems

1. Personal
    a. Problems at home
    b. Money Problems
    c. Worried about upcoming orders

2. Attitude
    a. Conditions surrounding the student
        (1) Social contacts
            (a) Peer pressure
            (b) Involved with the wrong crowd
        (2) Mental Feelings
            (a) Doesn't like the subject matter
            (b) Doesn't like the school
            (c) Doesn't like his/her instructor
    b. Conditions surrounding the subject
        (1) Unpleasant conditions - (Working in a fireroom)
    c. Natural ability of the student
        (1) Student may not be mechanically or academically inclined.
3. Academic
    a. Student not performing in a satisfactory manner.
    b. May be due to inadequate background or lack of effort.

C. Guidelines for Student Problem Identification

1. Instructor believes the student requires assistance as indicated by a significant change in student's behavior.
    a. Student is inattentive in class
    b. Student is consistently late for class
    c. Student cannot meet performance standards
    d. Students repeatedly fails to prepare assignments
    e. Student performs below expectations
        (1) ASVAB scores indicate much higher performance than he/she is demonstrating
    f. Student performance has dropped rapidly

g. Student is disruptive in class

2. Students ask for instructor assistance

a. May be in any area

b. The instructor must ensure that he remains within his limitations of assisting the student

c. The instructor may refer the student elsewhere

(1) Instructor should know the location of all the places to which he may refer the student for assistance.

(2) Chaplain, Navy Relief, Legal, ARC, Medical, Drug Rehabilitation, etc.

3. Referred by someone else

a. A classmate observes problem and notifies the instructor

b. A student asks a classmate for help who then notifies the instructor

4. Student may suddenly become a discipline case

a. Many good students have received disciplinary action because of:

(1) Drunk and disorderly, perhaps in the club

(2) Unauthorized absence

(3) Picked up for use of controlled substances.

D. Approaches to Counseling

1. Non-directive (student-centered)

a. Counselor plays a secondary role

b. Emphasis is placed on having the student think through, talk through and explain his/her difficulty so that the student will fully understand and offer a solution to the problem.

c. Elements of a non-directive counseling session

  (1) Listen to the student in a friendly, but analytical manner.

  (2) Do not make a show of authority.

  (3) Do not give any unsolicited advice.

  (4) Do not argue with the student.

  (5) Talk or ask questions under these conditions:

    (a) To help the student talk

    (b) To relieve any fear of the student

    (c) To thank the student for reporting his/her feelings

    (d) To keep the student on the subject

    (e) To clarify any misunderstandings

    (f) To encourage the student to explore additional information and alternate solutions

d. Time consuming

e. Effective in solving the immediate problem

f. Extremely effective in obtaining the desired long range results

  (1) By helping the student become more mature.

  (2) Using his/her own thoughts and ideas to solve one problem encourages the student to utilize these same resources in solving a wide range of problems that may arise in the future.

2. Directive (Counselor-Centered)

  a. Counselor plays the dominant role

  b. Major emphasis is placed on giving information and making the decision for the student

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c. Uses

(1) When the student does not respond to non-directive or combination counseling

(2) When controlling factors are definite (Navy rules and regulations, command policies, school instructions, etc.)

d. May solve immediate problem

e. Does not tend to initiate meaningful change in the student on a long term basis

3. Combination

a. Counselor and student work as a team to identify and to solve the student's problem

b. Contains elements of a directive and non-directive counseling session

c. Assists the student in solving his/her immediate problem

d. Student will develop self-confidence and be able to solve similar problems in the future without the assistance of the counselor

e. Permits flexibility in dealing with a wide variety of student problems

E. Factors to Consider in Selection of Proper Approach

1. Type of problem - personal, academic or attitude

2. Time available - break, after class, etc.

3. Student personality - introvert, extrovert, gregarious, solitary, persistent, vacillation, etc.

4. Student emotional stability -

a. Broad emotions - gets emotional about a wide variety of things

b. Narrow emotions - gets emotional in relatively few situations

5. Past experiences with the individual

F. Procedures for Conducting a Counseling Session

1. Preparing for the session

   a. Assemble and familiarize yourself with all available data

      (1) If possible and appropriate memorize significant information so that there is no need to refer back to notes and records during the counseling session.

      (2) An excessive use of records and notes can have an inhibiting effect on the student.

   b. Formulate a temporary plan of action to identify student problem.

   c. Provide a setting that is quiet, private, comfortable and adequately lighted and ventilated.

2. Starting the counseling session

   a. Put the student at ease

      (1) After coffee or soft drink

      (2) Allow student to smoke, if permissible

   b. Has been omitted because of military specific materials.

   c. Establish rapport with student

      (1) Builds student confidence

(2) Gives student a sense of well being

(3) Shows an interest in student as a person

(4) Discuss topics of common interest - student's achievements, strengths, hobbies, current events, sports, etc.

(5) Student will not reveal his/her true feelings or opinions until rapport has been established.

(6) Time spent establishing and maintaining rapport at the start of the session will save time in the long run.

d. Do not express your own opinions or attitudes, to do so might influence the student to say what he/she believes the counselor wants to hear, rather than what he/she thinks. Could obscure the problem.

3. Conducting the counseling session

a. Utilize proper techniques for selected approach

(1) Shift from one approach to another as the situation dictates

b. Be yourself, don't put on an act

c. Speak in simple language

d. Ask only one question at a time

(1) A good way to begin is to ask questions that require a simple yes or no answer, then expand around their response.

(2) Student has a chance to talk freely and to participate actively

(3) Student feels that he/she is helping himself/herself

e. Give the student enough time to think about the question

f. Do NOT interrupt the students unless absolutely necessary

g. Watch for and probe evasive answers

  (1) Evasive answers may indicate problem area.

h. Search for the accurate or correct answer

  (1) Answers give counselor insight into student's personality, attitude and problem

  (2) Responses also provide clues to possible ways of leading the student to his/her own selection of corrective action.

i. Realize your limitations

  (1) Refer to appropriate person or agency if counselor is unable to assist the student.

    (a) Identify real problem

    (b) Decide if assistance can be provided

    (c) Know what agencies are available and what services are offered by these agencies.

j. Requirements of the counselor

  (1) Counselor must demonstrate a positive attitude towards the student.

  (2) Counselor must inspire the student to accept him as a desirable individual, as a person worthy of authority, and as a leader in his profession

  (3) Possess a sincere desire to help the student

  (4) Understand human nature

  (5) Listen patiently to the student's confidences and be aware of your prejudices.

  (6) Be able to communicate advice, ideas and suggestions to the student.

  (7) Do not stereotype the student. No two students react the same way to a problem

  (8) Collect all required information

    (a) Used to provide background information

(b) Do not work from this external data or from an external framework

(9) Counselor seeks to enter and to experience the private and subjective world of the student

(10) Empathy is the key which unlocks the counselor's understanding of the student and the student's understanding of himself.

(11) Do NOT betray student's confidence by discussing the student's problem with individuals that do not have a need to know.

(12) Do not use the counseling session as a spring board/platform for your own selfish or personal causes.

4. Developing a plan of action

   a. Assist student in developing his own plan of action whenever possible

      (1) Consider alternate plans but ensure one is selected and the student is committed to persue his course of action

   b. Determine if further counseling is required

   c. Determine if referral to another person or agency is necessary

   d. Keep in mind counseling develops around two controlling factors

      (1) What is good for the organization

      (2) What is good for the student

5. Closing the counseling session

   a. Instill a feeling of accomplishment in the student (whenever possible).

      (1) Be sure to get a commitment from the student on a course of action to solve his/her problem.

   b. Give the student credit for his/her contributions

c. Close the session smoothly and tactfully, and on a positive note

6. Conducting follow-up activities

a. Arrange for appointments if referrals have been made

b. Conduct additional research for future counseling (if required)

c. Check results of counseling session

G. Purpose of the Academic Board

1. To make recommendations concerning student progress

2. Not to be used for disciplinary purposes

H. Minimum participants of the Academic Board

1. Chairperson

2. Three additional members

3. Chairperson shall appoint one member of the board to serve as recorder as a non-voting member

4. Each department/school must develop a list of those individuals who are qualified to serve as chairperson and/or Academic Board members

I. Duties of the Academic Board

1. Recommend to the training officer or higher authority a course of action when a student is qualified to accelerate his/her training

2. Recommend to the training officer or higher authority a course of action when a student has failed to achieve the learning objectives

a. Extension of training time in a group-paced course

b. Probationary continuance

c. Continuance of training without probation

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d. Elimination from training and recommendation for disposition

  (1) Lack of motivation drops cannot be reassigned or reclassified for further training

  (2) Hardship cases may be reassigned to training in another area

  (3) Academic drops may be reassigned to training in another area

3. Maintain adequate records of the academic boards recommendations

  a. Records of students dropped from training MUST be maintained for NOT less than one year

  b. Student entry, graduation, setback and attrition will be recorded in NITRAS.

    (1) NITRAS - Navy Integrated Training Resources and Administration System.

INFORMATION SHEET 1.27.1I August 1979

TITLE: SPECIFIC REQUIREMENTS FOR THE 30-MINUTE PRACTICE TEACHING EXERCISE LESSON #4 (SKILL OR SKILL AND KNOWLEDGE COMBINATION)

INTRODUCTION:

The purpose of this information sheet is to outline the requirements necessary for satisfactory performance of a 30-minute practice teaching exercise.

REFERENCE:

1. Instructor Training Course A-012-0011

INFORMATION:

A. Specific Requirements

1. Select a topic (DO NOT select a topic on sex, religion, politics, or anything that could be dangerous to the human element. When in doubt obtain staff instructor approval first.

    a. Skill or a skill and knowledge combination may be taught. Staff instructors reserve the right to make a specific assignment depending on student progress.

    b. Staff instructor may assign a different method (i.e. guided discussion).

2. Write a terminal objective (there is no requirement for the terminal objective to be met). Information sheet 1.5.1I applies.

3. Write a minimum of one enabling objective that supports the terminal objective (approximately 10-13 minutes of teaching material is required). Information sheet 1.5.1I applies. The enabling objective must be satisfied by the lesson topic.

4. Perform an objective analysis for each enabling objective. Information sheets 1.8.1I and/or 1.23.1I applies depending on choice of lesson type. Refer to 1.23.1.3 for combination format.

5. Develop criterion test items for knowledge part of a knowledge/skill combination. Refer to 1.22.1I.

6. Develop a lesson topic guide (two copies) in accordance with information sheet 1.9.1I.

7. Develop a job sheet. Required for all skill and skill/knowledge combination lessons. List on cover page.

8. Develop or procure any necessary training aids for use in developing the lesson topic as it progresses. List on cover page. Information sheets 1.21.1I and 1.24.1I apply.

   a. Cover page - combination lesson

      (1) Provide for all entries except homework which will be "NONE"

      (2) Criterion Test will be listed as: Progress Test A-012-0011T3 and Performance Test A-012-0011T4.

9. Annotate the lesson topic guide in accordance with information sheet 1.10.1I.

10. Demonstration Performance method or a combination of Demonstration Performance and Illustrated Lecture method combination or as assigned by a staff instructor.

11. Instruct a 30-minute practice teaching lesson.

B. Guidelines for Instructing the 30-minute Practice Lesson

1. Refer to Information Sheets 1.22.1I or 1.25.1I as appropriate depending on selection of lesson type. Note additional guidelines below.

2. If you choose a knowledge/skill combination ensure you teach the knowledge prior to teaching the skill. Use the Illustrated Lecture Method for the knowledge part and the Demonstration Performance for the skill.

3. Evaluation - combination lesson

   a. Check for understanding

      (1) Ask five thought-provoking questions of the class to check for understanding of the lesson topic. List questions and answers in the OUTLINE OF INSTRUCTION COLUMN.

(2) If students are unable to answer the questions, reteach as necessary.

b. Complete: Progress Check A-012-0011T3
Performance Test A-012-0011T4

C. Instructional Materials Development Checklist for Practice Teaching Lesson #4:

1. Prior to your practice teaching lesson date you are required to have the following items checked and approved by a staff instructor.

CHECKLIST STAFF INSTRUCTOR/DATE

a. Topic .... ________________________

b. Terminal Objective............. ________________________

c. Enabling Objective(s).......... ________________________

d. Objective Analysis............. ________________________

e. Criterion Test Items(if applicable)________________________

f. Job Sheet...................... ________________________

g. Lesson Topic Guide............. ________________________

h. Annotated Lesson Topic Guide... ________________________

i. Other Developed Lesson Materials. ________________________
(if applicable)

2. The following items must be provided to the staff instructor just prior to presenting your practice lesson;

a. Instructional Materials Development Checklist

b. Copy to Lesson Topic Guide

c. Copy of Job Sheet

d. Copy of other Developed Lesson Materials (if used)

REMEMBER THAT PERFECTION IS ACHIEVED THROUGH PRACTICE. CLASSROOMS ARE AVAILABLE FOR YOUR USE TO PRACTICE THE LESSON PRIOR TO PRESENTING IT FOR FORMAL EVALUATION.

NAVEDTRA 107

A Manual for Navy Instructors

An Introduction to the Navy's Systems Approach to Training

1 SEPTEMBER 1974

Chief of Naval Education and Training Support, Pensacola
Naval Instructional Technology Development Center
San Diego, California

Preface

Everyone talks about the systems approach to training, but few know its precise meaning or implication. The Chief of Naval Education and Training has directed that the systems approach to training be implemented for Navy education and training.

This edition of the Manual for Navy Instructors is intended to provide an introduction and guidance to Navy education and training activities for planning, conducting and evaluating instruction, with emphasis upon the role of the instructor as a manager of learning.

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2 September 1974

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Before Using This Manual

Since the purpose of this manual is to acquaint you with the Navy's systems approach to training, it is structured to be used according to a systems procedure. The procedure you should follow is:

1. Read the training and learning objectives preceding each chapter. The training objectives indicate overall goals of the individual chapter's subject matter. They are achievable when chapter materials are combined with additional instruction and/or materials selected from the bibliography. The learning objectives specify behavioral learning outcomes which are facilitated by text materials and serve as examples you might employ when writing objectives for lessons, instructor guides, or curricula. Determine what each learning objective requires you to do on completion of the text materials for that chapter.

2. Read the text. Use the learning objectives as a guide while reading to be certain that you are receiving the information that will allow you to perform the behavior specified. If an objective says that you should be able to "define instructional technology," it means you should be able to do this correctly from memory.

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3. Take the self-test at the end of the chapter *immediately* upon completion of the text for that chapter. When you have completed the self-test, go back to the learning materials in the text to verify your answers.

4. Read the test problems that are included at the end of Chapters Two through Eight. These problems are intended to test not only the information in the chapter, but also your problem solving ability after internalizing information from the chapter and other sources, including previous chapters. These problems may be answered by the individual reader or could form the basis for an interactive discussion in a classroom or learning group.

If systems procedure is followed, your learning of how the systems approach works will be enhanced by utilizing the manual as it is structured to be used.

There are terms in the manual with which you may be unfamiliar. Many terms in the text are printed in bold face; bold face terms are defined in the margins, adjacent to their appearance in the text.

The Navy Instructor

Chapter

1

Objectives

TRAINING OBJECTIVE

Upon completion of this subject, the learner will be able to assess his (her) potential role as a Navy instructor.

LEARNING OBJECTIVES

Upon completion of this chapter, the learner will be able (with 100 percent accuracy) to:

1. List three roles that can be assumed by a Navy instructor.
2. Write a definition of the instructor's place in the Navy organization.
3. List four duties of the individual learning supervisor.
4. Recognize the proper sequential steps a PI (Programmed Instruction) administrator must employ.
5. Explain in writing how the duties of an instructor technologist differ from those of the PI administrator.
6. Write two conditions which guide the ethical conduct of a Navy instructor.
7. Name the three parts of the communication process and give an example other than the ones in the text.
8. List two reasons for change in Navy training.
9. When given manuscript types, indicate which should be given copyright consideration.

Chapter One

The Navy Instructor

INTRODUCTION

The demands pressing on education are calling for a second look at the time-tried methods of instruction that have been used over the years. Increasing numbers of students coupled with the spiraling costs of education call for bold action and a hard look at what is being taught.

Recent unrest on college and university campuses across the nation is one manifestation of the dissatisfaction with the present educational system in our land. We, as educators, are being put on report for not doing our homework. The students are wise to us and our closely guarded secrets. Why have educators found it necessary to dole out secrets to their pupils on a piecemeal basis, saving a tidbit for the next class? Is it not the role of the teacher to impart knowledge? The examination of and answers to these questions are bringing about a change in emphasis. The emphasis is changing from the teacher's teaching to the student's learning. Student learning is the important factor in education. The materials and methods of instruction are being systematically programmed to achieve this end. The veil of secrecy is lifted, and the student is being told what he is to learn in order to achieve learning goals. The development and application of engineering concepts to specialized advances in space technology have introduced new instructional methods in technical and vocational training.

SYSTEMS APPROACH: An overall structural method for the design, development, delivery, and evaluation of Naval training. Derived from engineering systems approach.

In a systems approach, advance planning and allowances for contingencies or changes must be made well ahead of their occurrence. Broad goals, daring decisions and carefully outlined objectives are necessary to make a system function. The design of a complete system should allow for revision or replacement of elements that do not function, without shutting down the whole system. Application of a systems approach to training in the Naval community and elsewhere combined with innovations in learning technology and educational psychology figures significantly in the long-range plan to make education relevant and practical in our changing world.

It is the goal of this manual to inform the new instructor of the changes that are taking place in Naval training and to aid the practicing Naval instructor by adding these new dimensions to his skill.

ROLE OF THE NAVY INSTRUCTOR

In the past, the role of the Navy instructor was to be a capable platform teacher. To do this, he had to learn platform methods, how to write lesson objectives, how to outline and write lesson plans, to be able to design and often make his own training aids, and to motivate students by his own example. The instructor, alone, was responsible for what was taught in his class. The amount of learning that took place had a direct bearing on both how well the lesson was prepared and the teaching skill of the instructor. Many differences in the quality and content of lessons existed. Training was repeated, and training aids were made over and over with only minor changes which may have been unnecessary. This increased the cost of an already expensive method of teaching. New methods and improved standards needed to be developed to cut down these costs and, at the same time, improve instruction.

To establish a higher standard of learning in Navy training, learning materials are now being made for student self-learning where students are permitted to learn at their own speeds. These lesson materials are called "Self-Paced Individualized Instruction." They may be presented in many different forms (booklets to multi-media). By putting lessons and courses in standardized packages, uniform learning is expected to take place; and repetitious training can be avoided. Now, instead of the instructor carrying the whole load for the learning that takes place in his class, more responsibility will shift to the Chief of Naval Education and Training (CNET). CNET is assuming a large role in developing these self-paced materials and setting standards for learning.

SELF-PACED INDIVIDUALIZED INSTRUCTION: All forms of instruction that are learner-controlled; not just PI.

MULTI-MEDIA: A variety of media for training. Under ideal conditions, a student may have access to choices of media best suited to his individual learning needs.

COMMUNICATION/ COMMUNICATIVE PROCESSES

An instructor must be able to communicate with students. Communication is a three-part process composed of a source, symbols, and a receiver. An example of communication is art. The artist is the source or sender; his paintings, sculpture, written music or stories are the symbols (message); and the observer or listener is the receiver. Using an instructor as an example, you can see that he is primarily in the communication business. The instructor is the sender; his lesson, the symbols and the student is the receiver. The thrust of this manual should make the instructor aware of the many communication methods he can use to ensure the kinds of feedback that accommodate the specific learning needs of the student.

The Role/Function

As a result of the implementation of a new approach to training, new roles for the Navy instructor have arisen. These new jobs are Individual Learning Supervisor, Instructor Technologist, and Programmed Instruction Administrator.

INDIVIDUAL LEARNING SUPERVISOR

The role of the individual learning supervisor is an integral part of the systems approach to training and is crucial to the implementation of individualized self-paced instruction. He is trained to function in the classroom and laboratory as an advisor and guide for the learner. The duties, responsibilities, and authority of the individual learning supervisor would include the following:

LEARNER: Synonymous with student, trainee and pupil in the manual.

1. Orient new learners to the individualized learning system.
2. Supervise the learner's study by helping select the media best suited to his abilities with the subject matter.
3. Provide counseling and guidance service to the learners.
4. Help maintain steady progress for the individual learner by giving personal attention to his learning needs.
5. Diagnose subject matter difficulties and help the individual overcome them.
6. Be able to administer and evaluate tests and diagnostic devices and maintain scholastic records.
7. Provide continuous review of learning materials and methods.

MEDIA: Plural of medium (a medium being one form of stimulus or communication). Generically, media can refer to all forms of communication combined.

SUBJECT MATTER: The topic of a lesson, program or course.

8. Submit recommendations for systems improvement in addition to performing other duties as prescribed or assigned.

The individual learning supervisor has major responsibility for learner, academic, military, and personal activities. The need for this close supervision can be explained by the consideration of the human values which have to be satisfied for the learner to function properly in the Naval learning environment. The learner's personal problems can adversely affect his learning efficiency.

INSTRUCTOR TECHNOLOGIST

A relatively new NEC (9506 Instructional Programmer) describes an instructor technologist as one capable of preparing and administering programmed instructional materials. This may be one of the areas you will be selected to follow in your assignment as a Navy instructor. There are many facets to the performance of this role. An instructor technologist, after proper training, may take part on a task analysis team, become a program writer, or take part in testing and evaluation. Any of these roles is important to the Navy's systems approach to training. This billet and other changes occurring in the field of education offer many opportunities in the general area of instructional technology. A great number of Naval and civilian personnel needs to be trained in this growing field to write programmed materials for all technical and vocational training. The use of programmed material is proving to be economical as well as time and effort saving.

Although the initial costs of installation may be greater than for conventional instruction, in the long run the costs are amortized due to the economies realized as a result of the number of students who will use the materials.

The Navy has to train thousands of people in all rates and subjects. Costs become justified because a large number of students take each programmed course. Therefore, the cost per student hour is lower than with conventional instruction.

PI ADMINISTRATOR

PRE-TEST: A test, given prior to instruction, which tests the objectives of the instruction and establishes what the learner knows (entry level) in relation to those objectives.

POST-TEST: Test used upon completion of instruction. Usually with PI and criterion-referenced.

BASE LINE OBJECTIVES: Those objectives in a programmed instruction course which must be attained by all learners.

The PI (Programmed Instruction) administrator forms an important link in the individualized learning system chain. The PI administrator must be proficient in all aspects of programmed instruction: Establish the proper learner environment, direct and give *pre-tests*, evaluate pre-tests to be certain that learners are at the proper entry level, direct the learner in correct programmed learning procedures, administer and evaluate post-tests and determine whether the learner has met the base line objectives or must repeat the course. Frequently, if learning objectives have not been met, the learner can be directed by the PI administrator to remedial material or given an alternate media route through the learning material for the group of objectives.

Professional Precepts of the Navy Instructor

ETHICS

As a Navy instructor, your students will be influenced by your behavior and appearance. It is important to remember that as an instructor you influence by your example. Students learn not only observable behavioral objectives, but also suggested affective or attitudinal objectives by your model. To the student, you *are* the Navy!

You will develop as an instructor, using the methods that made you proficient in your field of work. Growth through practice, reading, research, and keeping up with new developments is important to this effort. Becoming an instructor will add scope to an already acquired skill. Another attitude you must acquire is to accept change. If you are a new instructor trainee, this may be easy. It may be more difficult for those with established patterns for instruction.

Whenever change or innovation is taking place in a field of endeavor, there are many who resist the change and stick with the "tried and true" they have known and been comfortable with in the past. Marshall McLuhan has said that change, even for the sake of change itself, is part of our way of life in this time of rapidly changing technologies. Alan Toffler *(Future Shock)* echoes this view and says in effect that man has to make change a part of his life style. Rapid change in Naval training and education has become necessary due to changes in other disciplines and technologies. Computers have compacted the time required to accumulate and process data. This has accelerated knowledge and change in technology. Rising costs have also brought about innovative changes. Turn around time in training, for change as it occurs, is another factor. The Navy is constantly making updates in ships and equipments. This means changes in training personnel in order to man and maintain these new systems. It should not be difficult to understand the need for broadening the training of platform instructors to encompass many other areas of instructional technology. Change is important for survival in a world of increasing complexity. More functional, sophisticated ships, manned by fewer highly trained personnel are reasons for change in Naval education and training.

COPYRIGHT CONSIDERATIONS

One additional professional precept that must be mentioned is that thou shalt not plagiarize! If you suspect that some of the material you plan to use in a published program in printed or audio-visual form for general or military distribution is copyrighted, consult the latest SECNAVINST 5870.1 series to be certain there is no infringement. Publication of copyrighted material without consent from the holder or publisher of the original copyrighted items is illegal and can be costly. If there is any doubt, check thoroughly and then obtain permission in writing before you publish. Indicating or crediting a source in a publication is insufficient.

INSTRUCTOR/ STUDENT RELATIONSHIPS

As a Navy instructor, it will be your responsibility to establish good relationships with the students. In establishing these relations, the more you know about the individual, his problems, and his potential goals the better you will be prepared to guide his behavioral development. General theories, laws of learning, human factors, motivation, and environmental influences all make up parts of an instructor's portfolio to identify and solve student learning problems. A working knowledge of these elements will allow the instructor to empathize with the learner. Once the student's basic human needs have been satisfied and a proper environment has been secured, the student with adequate motivation is ready to learn. It is not being asked that the learner be mollycoddled into learning, but rather that the student be looked upon as a human being with certain inherent rights and feelings.

EMPATHY: In the manual's usage, an understanding or feeling for the learner on the part of the instructor or supervisor.

INSTRUCTOR'S PLACE IN THE ORGANIZATION

Since the Navy instructor is in the front line of the training system, it must be clear that he is the pivotal point around which the whole system functions. Without the PI administrator, instructor technologist, individual learning supervisor and the platform instructor, the entire system would not be effective. The gauntlet is down, and the rewarding challenges of instructional technology are opening new vistas for the motivated Navy instructor.

OPPORTUNITIES IN INSTRUCTIONAL TECHNOLOGY

Because of continuing modifications and changes required in Naval Training, the necessary skills required of an instructor are continually increased. He can no longer be content with having only the abilities of a platform instructor. He must expand his horizon and become aware of the latest audio-visual and training aids available to assist his training efforts. He must constantly review available learning programs and make changes as they are needed.

QUALIFICATIONS OF AN INSTRUCTOR

During the current period of transition in Naval Training, the Navy instructor will continue in his role as a platform instructor and use the new materials and methods as they become available. With the acquisition of new skills, the instructor will become a specialist in areas of self-paced learning. He will be freed from teaching by rote learning and be able to aim his instructional skills toward helping the student. He will be able to tutor the slower learners and take pride in helping those who cannot make it on their own.

ROTE LEARNING: Learning material that must be committed to memory. Memory learning may be achieved in terms of words, but often the meaning of those words is not learned.

TUTOR: An instructor in a one-to-one relationship with a learner. (May be extended to a small group where each learner receives personal attention.

Curriculum changes at Navy Instructor Schools reflect the urgency of preparing instructors for the implementation of the systems approach to training. Special courses in programmed instruction writing and implementation are also being taught. Instruction in understanding and utilizing human factors and laws of learning are included in the new curricula. Instruction in the use of training aids and other media is also being updated in line with behavioral objective requirements. Specialists in the field of educational technology under the direction of CNET are designing the entire system which will direct Naval Training in the future.

SELF TEST FOR CHAPTER ONE: THE NAVY INSTRUCTOR

1. Three roles that can be assumed by a Navy Instructor are:

a.________________ b.________________.
c. ________________

2. The instructor's place in the Navy organization is (your definition)
____
____

3. Fill in at least four of the statements listing the duties of an individual learning supervisor.

a. Orient new ________ to the ________ ________ system.
b. Supervise ________ study by helping ________ select ________.
c. Provide ________ and ________ service to the ________.
d. Help maintain ________ for ________ by giving personal attention to ________ ________ ________.
e. Diagnose ________ ________ difficulties and help the ________ overcome them.
f. Be able to administer and ________ tests and diagnostic devices.
g. Provide continuous ________ of ________ materials and ________________.
h. Submit recommendations for ________________ improvement.

4. The steps a PI administrator must employ (in the following order) are: to distribute objectives, administer pre-test, give program, administer post-test and evaluate test results. (True or False)

5. Explain how the duties of an instructor technologist differ from those of a PI administrator. ________________________________
____
____

6. Two conditions which guide the ethical conduct of a Navy instructor are
a.________________ b.________________.

7. The three parts of the communication process are: a.____________________
b.____________________c.____________________.
An example (not from the text) is ____________________.

8. List two reasons for change in Naval Training.

a.____________________
b.____________________

9. Underline those manuscript types listed below which should be given copyright consideration before publication in your document.

a. Published book.
b. Navy manual.
c. Unpublished book.
d. Material published by a friend.
e. Your own conclusions from research.
f. Educational theories

The Student and the Learning Process

Chapter 2 Objectives

TRAINING OBJECTIVES

Upon completion of these subjects, the learner will be able to:

1. Assess the role human factors play in determining the learning capability of individual learners.
2. Analyze and discuss the kinds of learning (according to Gagné) in their order of complexity.

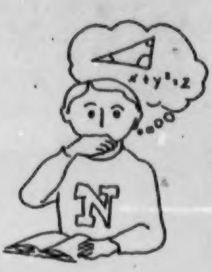
LEARNING OBJECTIVES

Upon completion of this chapter, the learner will be able (with 100 percent accuracy) to:

1. When given a list, identify how human factors may contribute or distract from learning.
2. When given three types of extrinsic motivation, explain how they may be used effectively.
3. Identify four specific skills that can improve listening habits and note taking.
4. Explain how listening habits contribute to study skills.
5. Define learning.
6. When given the laws of learning, define them.
7. List Gagné's categories of learning in their hierarchical order.
8. Explain how the instructor can infer the occurrence of transfer of learning.
9. Identify two forms of adjunctive learning.

Chapter Two

The Student and the Learning Process



The student, in order to learn, must be prepared to learn. Much research has been done to investigate proper conditions and environments for learning; but unless the learner is in the proper state of mind, little or no learning will take place. The late Abraham Maslow designed a pyramid of human needs, each of which creates motivation for achievement in succession from the base of the pyramid. As each level is attained, the motivation for that group of needs is extinguished. Motivation to the next highest level takes over as the more basic needs are satisfied.

HUMAN FACTORS

These needs or desires show us the human side of the student, and until some of the basic needs (food, shelter, clothing, rest, protection) are satisfied, the student will not be prepared to learn. Once the basic needs are met, the abstract (but real) needs for social acceptance, ego gratification, and self-fulfillment may be pursued.

MOTIVATION

CONDITIONED MOTIVATION: That motivation which is controlled or activated by the instructor or teacher.

Maslow's hierarchy of human needs shows us a path of motivation. Learner motivation is a key factor toward the achievement of course goals. Conditioned motivation can stimulate the learner more strongly than any force or threat. If motivation takes place in a comfortable environment, free of hostile elements, the learning process is enhanced considerably. Motivation techniques include the establishment of specific attainable goals, compensatory rewards of a physical or psychological nature and/or the interjection of competition with self or others.

Specific attainable goals: Long range goals for career or life vocation are fine as long as the learner believes them to be attainable. It may be the instructor's or advisor's role to help the individual define his potential and set up a program for attainment. Motivation toward attainable goals could be the most important step in directing a seaman or seaman recruit on a successful Navy career. These goals, at the course level, should be broken down into behavioral learning objectives of a size and scope attainable by the target population for a given subject matter.

TARGET POPULATION: The group of learners for which specific learning materials are designed.

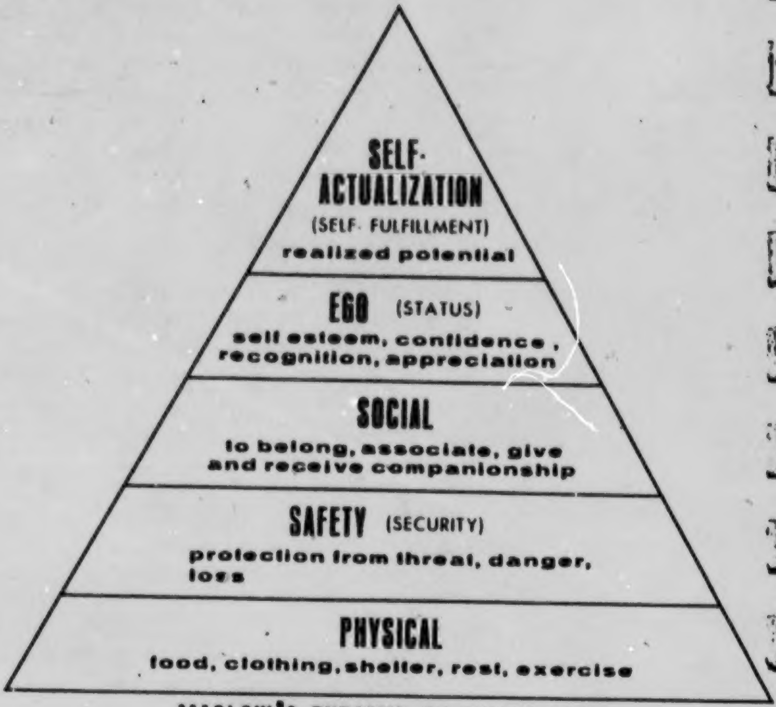
Compensatory rewards: Physical rewards have frequently been used by educators to motivate achievement. The Navy instructor has used the physical reward method in a limited way by granting special privileges of early liberty or release from routine duties. He may have used the psychological method employing badges or posting an honor roll for his class.

Herzberg and others have stressed that rewards as motivation are short-lived and other forms of motivation must eventually be used. Herzberg goes as far as to say that all forms of extrinsic motivation eventually fail. However, as a stepping stone to higher order motivation, rewards are positive motivators.

EXTRINSIC: An outside influence. In terms of motivation, the three types of conditioned motivation discussed in Chapter Two.

Competition: In the area of self-paced individualized instruction, the learner is or should be motivated by success in achieving the learning objectives. His motivation may

PYRAMID OF NEEDS


SELF-ACTUALIZATION
(SELF- FULFILLMENT)
realized potential
EGO (STATUS)
self esteem, confidence, recognition, appreciation
SOCIAL
to belong, associate, give and receive companionship
SAFETY (SECURITY)
protection from threat, danger, loss
PHYSICAL
food, clothing, shelter, rest, exercise

MASLOW'S PYRAMID OF HUMAN NEED

be enhanced by his accelerated pace or the fact that his new behaviors give him an added skill which he is proud to be able to perform. Each level of attainment puts him in a higher peer group providing him with the potential motivation to compete for even higher peer group recognition.

PEER GROUP: A group, all members of which have the same relative qualifications and abilities

LISTENING

Another stimulus to learning is to encourage the learner in good listening habits. Research by Dr. Ralph G. Nichols and others has indicated that listening is a skill that can be developed into an art. Good listening habits can help the learner in organizing and taking notes. A substantial amount of research would indicate that learners who take notes tend to learn more than those who do not. A method of creative note taking should be encouraged. Supplying the student with lesson objectives prior to the lesson is a good aid to note taking. If you take the time with your students to point out some of the skills involved in listening and note taking, your instruction and his learning will be improved.

There are several steps to good listening. Let us apply them to a classroom lecture situation.

First: Be prepared to listen. Be ready to direct your attention to the subject eliminate distractions and have only your note taking materials (and a list of the lesson objectives) at hand.

Second: As a listener, you are responsible for comprehending what the speaker is saying. Try to put his examples in terms of your own experience. Make the speaker's ideas and examples your ideas in terms of how you might express them.

Third: You may not agree with the speaker, but save your arguments for after the lecture. Listen for understanding. Evaluation should be postponed until all the facts are delivered by the speaker; you may find that agreement exists.

Fourth: Do not get emotionally involved with the speaker. Watch out for turn-off words or slang expressions which may tend to arouse negative emotions. React to the speaker's ideas rather than any idiosyncracies in the speaker's vocabulary. Making a list of words that could offend you might help you overcome emotional blocks that they can create.

Fifth: If you have a list of the lesson objectives, they will aid you in listening for the primary ideas expressed by the speaker. Listen for ideas rather than for facts.

Sixth: Stay mentally flexible. Your mind acts more quickly than any speaker's voice. Use the extra time to review and summarize the main thought of the lecture. If listening habits and note taking habits are improved, comprehension and retention of ideas will tend to increase.

Consideration of the human needs, employment of proper motivation and training the student to be a good listener are necessary in building a foundation for good study habits. Objective assignments for study periods (issue a study list for an assignment of material which could be confusing or complex) will help prepare the learner for the next lecture or learning lesson.

STUDY SKILLS

Theories of Learning

THE LEARNING PROCESS

Fortunately, for the instructor, learning is a continuous process going on constantly in all humans. The instructor has only to direct the course of learning to the specific instruction for which he is responsible. The "only" is a deceptive qualifier of what the instructor must do, for his experience and ability will be tested. The knowledge he gains through awareness of the learner's needs and desires in terms of human factors and psychological well-being will aid his ability to teach them.

Learning can be defined as a change in behavior as a direct result of experience. The child on being told not to touch the hot stove does so (in many cases), thus learning the concept of "hot." The child is not apt to repeat this tactile experiment to reinforce the concept of "hot." Robert M. Gagné, in *Conditions of Learning*, lists various categories of learning in order of complexity and difficulty.

Although the concept of "hot" (temperature sense) is basic, most concepts are complex. Concept learning (discrimination between types of things or ideas in or outside of a concept set) is one of the most complex forms of learning.

LEARNING THEORY

Today's learning technology did not appear overnight. Early in the development of educational psychology, E.L. Thorndike suggested several laws of learning: the law of readiness, the law of exercise, and the law of effect. Since Thorndike set down these laws in the early part of the twentieth century, three additional laws have been added: the law of primacy, the law of intensity, and the law of recency. Short definitions of these laws are as follows:

Readiness: Basic needs of the student must be satisfied before he is ready or capable of learning.

The instructor can do little to motivate the learner if these needs have not been met.

Exercise: Repetition or practice drilling learners in the material to be learned is effective.

Material which is subjected to this routine is remembered more readily. Exercise is good when a skill or job performance process is to be learned.

Effect: This law of learning is concerned with the emotional reaction of the student to the stimulus. His reaction should be positive or pleasant rather than negative in nature. Negative reinforcement might stimulate forgetfulness. Positive reinforcement is more apt to lead to success and motivate the learner. Do not frustrate the student by confusing or confounding him with learning materials he is not capable of understanding.

Primacy: What the instructor teaches must be right the first time. A student's first exposure to a given portion of learning is the most positive. If the learner must relearn, the relearning process can be confusing and time consuming.

Intensity: The more immediate and dramatic the learning is to a real situation, the more impressive the learning is upon the student. On-the-job training (OJT) in a real situation that a student is capable of learning will make a vivid impression on him. He is least likely to forget a hands-on exercise for which he is ready.

Recency: The closer the job training or learning time is to the time of actual job responsibility, the more apt the learner will be to perform successfully on the job.

KINDS OF LEARNING

Robert M. Gagné in his *Conditions of Learning* postulates eight types of learning. A familiarity with the types of learning, their complexity and order of difficulty will aid you in the design of individualized or group instruction. The kinds of learning will give you insight to the mechanisms which stimulate learning.

A brief description of the eight kinds of learning is given here. Gagné goes into greater detail, and it is recommended you read his book if you are going to write or design learning systems or programs.

As has been stated, learning is a change of behavior as a result of experience. Gagné and others break learning into stimulus (experience) or response (change of behavior) pairings. Stimulus-Response or S-R pairs are used by psychologists and program designers to illustrate learning situations.

1. *Signal Learning:* A single response to a single stimulus. A response may be made to a signal: Red light (signal) — Stop (response) or a military command; "Attention!" (signal) — Coming to attention (response). These are examples of simple conditioned responses as established by Pavlov's classic conditioned reflex experiments.

2. *Stimulus-Response Learning:* Similar to signal learning, but more exact in execution. Given a specific stimulus, the learner may have many alternative responses open to him. The instruction should establish only one of these responses. By using a reward incentive, the instruction soon acquires the desired voluntary motor (muscle) response from the learner. Gagné uses the example of a dog's learning to "shake hands" as an example of stimulus-response learning.

3. *Chaining:* Tying together two previously learned S-R pairs which will (after association) be remembered by the learner as a chain. Word associations like "hat and coat," "corned beef and cabbage" and "bat and ball" are verbal examples of chain connections.

4. *Verbal Association:* Another chaining technique with a variation is that a connection between two words or verbal segments is learned with the aid of previously acquired word or visual picture. An example might be learning that "señorita" is the Spanish word for girl or young lady. The fact that Rita is a girl's name might be the connection that will give the learner the association señ*orita* - *girl.*

5. *Multiple Discrimination:* The student learns to make different responses to similar stimuli. Although each of the responses is a simple chain, the connections between each tend to interfere with remembering the individual responses of others in the group to be discerned. This interference can be overcome by rote learning of the individual items isolated from the group.

Since these multiple discriminations are usually simple chains, extensive repetition or practice (characteristic of rote learning) is seldom required.

Example: Discriminating new models of automobiles by their slight variations in style is cited by Gagné.

6. *Concept Learning:* Consists of the learner being able to discriminate an entire class of stimuli which may differ considerably but still fit within a single concept. The concept of "dog" would contain a wide variety of sizes, shapes and colors. Many of the attributes of concept "dog" are characteristics of other animals; but when the learner has isolated those attributes which are peculiar to dogs, he has mastered the concept.

7. *Rule Using:* Formally, Gagné defines a rule as "a chain of two or more concepts." The learning of rules is a familiar form. Formulas in chemistry, mathematics or physics are rules. The "principles" of English are rules. To understand a rule, however, the concepts which combine to make the rule must be known or learned before the rule can be acquired and applied by the learner.

8. *Problem Solving:* The process of thinking, aided by the application of acquired rules, can be put to the task of solving problems stated in terms of those rules. Problem solving produces a higher order rule, and the act of solving a novel problem using learned rules tends to result in a higher rate of retention (remembering through use).

Having progressed through this hierarchy of "kinds of learning," it can be seen that each level of difficulty uses the elements of the simpler types of learning. The prerequisites for problem solving may be all of the other types of learning. You may find it difficult at first to keep the hierarchy straight. The following mnemonic device is offered as a job aid to facilitate your remembrance of the hierarchy: *Signals stimulate chained verbs; multiply*ing *concepts*, *rules* and *problems*.

TRANSFER OF LEARNING

Transfer of learning is one of the more valuable tools a program designer or instructor can use. All new learning involves enrichment from previous learning. This transfer of past experience to new learning situations can be positive or negative in nature. Well designed PI uses positive transfer of learning to develop skills by building from simple types of learning to the higher orders of discrimination, concept, rule using and problem solving forms of learning. Negative transfer can take the form of interference and litter the path to new learning. Frequently the only recourse from negative transfer is unlearning or relearning past behavior patterns. As an instructor, you can create positive transfer by organizing your learning materials in meaningful simple to complex sequences.

A simple chain may be thought of as a transfer of learning from one step to the next. For an example (using the concept), when you learned mathematics in grammar school, simple addition and subtraction preceded the learning of more complex problems involving multiplication and division.

INDIVIDUAL DIFFERENCES

Another variable that affects a student's learning or how well a student learns is the extent to which the instruction responds to individual entry level capabilities (psychological as well as intellectual). In a classroom situation where conventional instructional methods are used, individual differences in capabilities, backgrounds, experience and psychological make up are difficult to ascertain or control.

When self-paced individualized learning materials are used, many such differences take care of themselves since peer group pressures are eased or eliminated and the learner can move at his own most comfortable pace.

The existence of individual differences alone is a good argument in favor of alternate methods or media for the same or similar subject matter. If the learner has a choice of routes (books, films, PI, audio tapes, conventional classroom) through specific subject matter, he (with the aid of a learning supervisor) can determine the best method for himself.

Even in a group-paced environment, compensations can be made. If a norm is established by testing or discussions with individual learners, most of the students in the group will learn comfortably. Unfortunately, the slower learners will be harassed; and the faster learners will be bored. To handle the extremes of harassment and boredom, the instructor can arrange supplemental instruction (remedial) for the slower learners and challenging additional assignments for the faster students.

Instructional Support Systems

Most systems, unless they are sophisticated computerized branching programs designed to handle all types of learning situations, require two forms of additional adjunctive programs to support the slower learners or the faster students. The individual learner who is capable of job mastery but has a hard time making it through a conventional course in a norm-prescribed period of time is a challenge to any instructor.

Using self-paced materials with branching or adjunctive programming and creative counseling on the part of a learning supervisor can usually bring him up to speed. Sometimes a learner is not up to the entry level for a course. Remedial instruction may then be required to prepare the learner before he can start the course. Review lessons or programs are often required of all learners if the complexity or recency of training is an issue.

ADJUNCTIVE PROGRAMMING: Supplemental programs for remedial, accelerated or additional instruction or information.

REMEDIAL INSTRUCTION

Some courses are designed with an initial review phase to stimulate recall of prior learning and to orient students to the subject matter to be covered. If the instructor refers to remedial instruction as a refresher course rather than a bonehead review, he will be less apt to discourage or demean the learner. The use of a little dime-store psychology will show in terms of student accomplishment. Remember that students are human too and react to encouragement by showing a willingness to learn.

ACCELERATION

The advent of self-paced instruction besides improving learning efficiency has shortened learning time. For the rapid learner this has created a "time on my hands" problem. Unless methods of compensation, adjunctive learning or advancement are implemented, the time-cost savings will be wasted. Compensation in the form of liberty and special privileges has been mentioned.

Adjunctive learning in the form of more complex learning problems has been implemented in formal schools. Advancement, however, is still tied to a minimum-time in-grade restriction. Perhaps in certain hard-to-fill rates, acceleration of advancement could be instituted. Unless the incentives to learn are strong enough, rapid effective learning will not take place. Early advancement would also aid the highest human need: self-actualization.

SELF-ACTUALIZATION: Self-fulfillment. Realization and satisfaction of potentialities. Highest rank on Maslow's pyramid of human needs.

THE WHOLE LEARNER

This chapter has illustrated the student as more than just another face in the classroom. The student is a complex individual. If he is properly prepared and motivated toward learning, he will learn. As an instructor or a specialist in instructional technology, it will be your responsibility to prepare and motivate the learner. The additional duty of preparing or administering learning materials is also important. How well an instructor perceives and executes his role will determine the achievement of his primary goal: the student's learning.

SELF TEST FOR CHAPTER TWO: THE STUDENT AND TH LEARNING PROCESS

1. Identify the statement which best describes how human factors m contribute to or distract from learning.

   a. Students are always woolgathering.
   b. Students attempt to get out of homework.
   c. Students may have problems you are not capable of understanding.
   d. Until certain needs are satisfied, the student will not learn.

2. Explain how the (a) establishment of specific attainable goals, (compensatory rewards and (c) competition might be used effectively as learning incentives.

   a.____
   b.____
   c.____

3. Underline four specific skills that can improve listening and note takin

   a. Be prepared to listen.
   b. Argue with the speaker.
   c. Put speaker's ideas in your terms.
   d. Sympathize with speaker.
   e. Listen for understanding.
   f. Think about another subject.
   g. Try to pick holes in what the speaker says.
   h. Stay awake.
   i. Do not get emotionally involv with the speaker.
   j. Criticize the speaker's vocabulary.
   k. Do not read objectives until after the lecture.
   l. Read objectives before the lecture.
   m. Make notes on everything the speaker says.
   n. Stay mentally flexible.

4. Explain how listening habits contribute to study skills.

   ____

   ____

. Which of the following statements most correctly defines learning?

a. Responding to facts.
b. A change in behavior as a result of experience.
c. A changed experience as a result of action.
d. A change in behavior.
e. A new experience.

6. Define the following laws of learning:

a. Law of readiness ____________________.
b. Law of exercise ____________________.
c. Law of effect ____________________.
d. Law of primacy ____________________.
e. Law of intensity ____________________.
f. Law of recency ____________________.

. List Gagné's categories of learning in their hierarchical order.

a. ____________________.
b. ____________________.
c. ____________________.
d. ____________________.
e. ____________________.
f. ____________________.
g. ____________________.
h. ____________________.

. How can the instructor infer the occurrence of transfer of learning?
____
____
____

9. Two forms of adjunctive learning are a. ____________________
and b. ____________________.

TEST PROBLEMS — CHAPTER TWO: THE STUDENT AND THE LEARNING PROCESS

1. One of your students is having a hard time in the third week of a ten week course. His grades were above average in the first two weeks. What might be the problem?

2. Two of your ten students appear bored in class. They are the top scorers on tests, but they are beginning to disrupt the slower learners in their activities. What would you do about this situation?

3. Seaman Smith is motivated to learn, but keeps falling behind the class. You know he can learn the material by his past performance. What alternatives are open regarding Seaman Smith?

4. Many of your students do not pay attention in class. Some do not take notes. How might you remedy this problem?

The Systems Approach to Training

Chapter

3

Objectives

TRAINING OBJECTIVES

Upon completion of these subjects, the learner will be able to:

1. Organize a self-paced instructional program that can be used in a closed-loop system.
2. Design a step-by-step approach to a programmed instruction text for given subject matter.
3. Construct behavioral learning objectives containing BCS (behavior, conditions and standards).
4. Design, test, and evaluate simple learning frames.

LEARNING OBJECTIVES

Upon completion of this chapter, the learner will be able (with 100 percent accuracy) to:

1. Write a definition of "systems engineering" and describe how it relates to a systems approach to training.
2. Identify self-paced instructional elements.
3. List the steps for designing programmed instruction.
4. Explain in writing the processes involved in writing a programmed text.
5. Write definitions of the three components of a behavioral learning objective, given the three components.

Chapter Three

The Systems Approach to Training

SYSTEMS ENGINEERING

In recent years, the success of engineering systems has led educators to examine the potential of their application to education and training. The dictionary definition of a system is "an assemblage or combination of things or parts forming a complex or unitary whole: a mountain system, a railroad system." By combining systems with approach, a "systems approach" can be defined as a careful analysis of all of the aspects that go to make up any system. Applying a systems approach to training may provide the best basis of an improved method to analyze instructional needs, design, develop, evaluate and implement instruction. An engineering system, for example, requires methods of planning which employ new machines or operations, concepts and trained personnel to operate and service equipments. An overview of the required system has to consider these component parts as well as unforeseeable changes, time factors, probable costs, deteriorations, obsolescence of equipment, and the need for new or retrained personnel.

SELF-PACED INSTRUCTION

As parts of a system develop, people have to be trained to interact with new equipment and devices. An engineering systems approach creates a simultaneous readiness of men and machines. Programmed instruction is an ideal example of a systems approach to learning and is discussed in greater detail later in this chapter. While reading the PI section, notice how all aspects of the system, from goal through objectives and tests to final sequencing of learning materials, are built from a systems engineering concept.

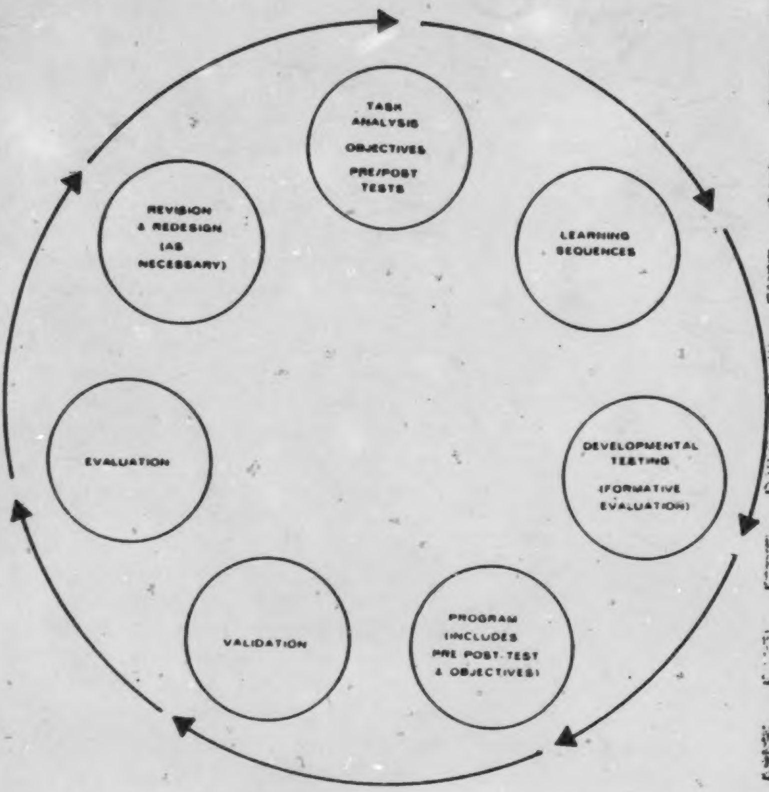
The success of the systems approach in engineering has given the Navy and other services the basis upon which to design a closed-loop system for training which provides for revisions through trial and error. This closed-loop system is being applied to vocational and technical training in the Navy as well as to other military and the private sectors. Training in all rates and grades is being updated or redesigned to fit the current and proposed needs of the Navy. Self-paced individualized instruction might consist of several PI programs combined with reference material, instruction and informational training films, slide-tape presentations, lists of objectives and reading assignments that the learners must accomplish on their own. Lectures, demonstrations, OJT, discussions, conferences, field trips, other activities and techniques can also be components of a self-paced individualized learning system. In implementing self-paced instruction, CNET believes along with other educators in vocational and technical training that PI is an important element in any training system.

SELF-PACED INDIVIDUALIZED INSTRUCTION: All forms of instruction that are learner-controlled; not just PI.

PROGRAMMED INSTRUCTION

To prepare programmed instruction, experience and the systems approach have prescribed certain procedures which must be followed in order to obtain validated results. There have been many how-to and best-way books written on all the steps involved with PI design, testing and evaluation. The Navy is in the process of designing its overall systems approach to training. Many of the programs and courses being designed by the

CLOSED-LOOP SYSTEM


TASK ANALYSIS
OBJECTIVES
PRE/POST TESTS
LEARNING SEQUENCES
DEVELOPMENTAL TESTING (FORMATIVE EVALUATION)
PROGRAM (INCLUDES PRE POST-TEST & OBJECTIVES)
VALIDATION
EVALUATION
REVISION & REDESIGN (AS NECESSARY)

Closed-loop systems approach to program design, implementation, evaluation, and revision.

Navy and other services will be interchangeable and thus will save millions of dollars in duplication of training costs between the services.

Well designed PI can be interesting and challenging for the learner, and the degree of difficulty is pre-established by his entry level (what he knows when he begins a program). He may have problems, but the program is designed to handle these problems if it is properly constructed. Three basic forms of PI are in use. The first form is the linear or Skinnerian form (named for B.F. Skinner, developer of the behavioral modification theory on which PI is based) which is set in a series of small steps to learning called stimulus/response pairs. The second form of PI is called intrinsic or branching PI (Norman A. Crowder contributed greatly to the development of the intrinsic form). The third form of PI is mathetics. While both the linear and intrinsic methods work on a simple to complex format, the mathetic approach can start with a general view and work back to the specific. Thomas F. Gilbert and his associates developed and brought mathetics into general use in the field of programmed learning.

The basic forms of PI have many variations, and construction of learning steps during development may also be arrived at in different ways. The discussion here will be limited to basic descriptions of the steps involved, and annotated references will be given to guide you to material for development of PI or other self-paced instructional methods. To begin, a need for training in a given area of subject matter must be generated. Then, a determination of whether or not it is feasible from a cost accountable and time point of view to develop PI for this subject matter must be made. Cost accountability means that the cost per student hour of instruction must be justified and the time factor deals with how long the instruction in this subject will be usable before technological or other reasons require the instruction to be redesigned. As an overall system design is implemented, determination of these factors will be facilitated. The factors of cost accountability and time may be predetermined, or you may have to do a real selling job through your chain of command.

After funding, broad goals setting out what the learner must be capable of doing upon completion of instruction should be defined: These goals need not be stated in specific behavioral terms, but it would be wise to do so. In analyzing the goals in the next phases, it may be resolved that the chosen goals are too broad for the time and funds allocated to the project.

The next three steps in the development of PI can and should be worked on simultaneously. They are task analysis, formation of behavioral learning objectives, and the pre/post-test development. The reason for combining these steps is that they are closely interrelated. In order to list specific learning objectives for all of the behavioral changes required of the learner, a careful analysis of the job and the tasks involved must be undertaken. Since PI is presented in a step-by-step form, the analysis must be thorough and not leave out any of the job tasks. The task analysis will contain covert (unobservable thinking or attitude) as well as overt (observable) behavior. The finished PI program will contain overt and covert responses. The Navy has developed task analysis in two phases: A job task analysis first, followed by a training task analysis. The job task analysis contains only the overt behaviors as determined by a survey of the rates in the Navy. This information is being translated for computer storage to be retrieved later for the training task analyses which will develop the covert responses and form a foundation for the compilation of the learning objectives. As the task analysis develops, the objectives will be suggested; and since the testing and evaluation of PI uses criterion-referenced measurements (based on the objectives), the objectives in turn become the test. Although the test may be written differently from the stated objectives, it must, by the nature of criterion-referenced measurement, contain at least the base-line objectives (those objectives that the learner must complete with 100 percent accuracy). These interrelationships between task analysis, objectives and testing procedures indicate that their simultaneous development is advantageous to the program designer.

Since many program designers will not be experts in the subject matter covered, technical advisors are assigned to aid the designer in subject matter areas. By the same token, the program designer helps the technical advisor in program design. The term "technical advisor" is used in preference to "subject matter expert" so that equal footing can be maintained between designer and advisor, and no one gets a swelled head. In ideal situations, teams of competent personnel in task analysis, program design, learning *sequencing*, test construction, and evaluation can be utilized to aid you and your technical advisor through the trauma of preparing programmed instruction.

TECHNICAL ADVISOR/ SUBJECT MATTER EXPERT: Terms referring to specialists in subject matter areas who work with learning program designers.

Having established the goals, learning objectives and test items, you are ready to start writing the program. The effort to this point has been compared to the bottom of an iceberg. The bottom of an iceberg is the largest part; but without it, the small section above water will not float. The rest of the PI steps, like the iceberg, will be visible. The hope is that it will also float!

The research is completed. Writing and sequencing the program remain. Your familiarity with the elements required in the program has been established during the previous steps. The rest should be easy. And it is until, with great confidence, you give your carefully manicured "sure-fire" learning sequence to the first target population learner. This is a learning experience for any program designer. It is also the reason for developmental testing. Your "sure-fire" sequence will probably encounter some difficulties. It may be best to use what Susan Markle refers to as "lean programming," (make the steps large enough so that the learner will encounter difficulty), so the learner learner will have problems. A sequence can always be added to after testing; but if a learner goes through a learning sequence without some difficulty, how would you know what to leave out; Target population students will be your best allies in the development of the program. Learner test results will tell you where the program and the sequences are weak. Careful evaluation of test results during this phase and interviews (or questionnaires) with individual learners will help streamline the course. Another thing to remember: once a learner has been through a segment of the program, he should not be used again because he is no longer a member of the target population.

When all of the learning sequences have been tested and revised, put them in their final order; rewrite (if necessary) your pre/post tests to conform with this order, and set up the objectives in the order of learning. Have enough copies of the program, tests and objectives prepared for the final phase: Validation.

VALIDATION: Testing of learning materials in a classroom or other natural environment under the conditions for which the materials were designed.

Validation should be a formal procedure. The process consists of administering your PI program to individuals in their classroom or carrel environment. The target population learners are given the objectives, PI instructions, the pre-test, the program and the post-test in that order and in a self-paced individualized time frame. The evaluation of the validation data should meet the preestablished standards set for the PI program. If the data does not meet this standard, be it 90/90, 100/100 or 90/80, the PI will have to be revised and revalidated until the standard is met. The 90/90 notation means that ninety percent of the students must achieve ninety percent of the objectives for the program to be valid. In many areas the Navy finds the 90/80 standard acceptable.

TASK ANALYSES

The Chief of Naval Education and Training has implemented a program to analyze the job tasks of all the Navy rates. Each rate through a survey of personnel working in the rate is being broken down into all its observable component parts. This job task analysis process will provide Navy and civilian course designers with the raw material to develop a training task analysis. The training task analysis is necessary to establish objectives, learning program sequences and testing procedures. In the private sector, the processes of task analyses combine the job and training tasks as they are developed into the various segments.

The analyses are carried out to ensure that the learner will be provided with all the necessary skills, in their proper sequence, to attain the end of course objectives. A thorough task analysis lets the course designer know not only what to include in a program, but also what not to include. A job task analysis includes only the tasks performed in a given position or job. A training task analysis starts with the job task analysis and adds knowledge factors, levels of skill and the necessary affective or attitudinal elements. All of the learning requirements to develop the program objectives must be included in a training task analysis.

ABOUT LEARNING OBJECTIVES

The contemporary mode for the specification of learning objectives is more accurate than lesson objectives of the past that were stated in broad general terms. Behavioral learning objectives contain BCS (B-statement of behavior, C-conditions under which this behavior will take place and S-the standard or degree of accuracy required to achieve the objective).

Since only observable behavior can be measured with any degree of accuracy, action verbs which indicate an observable behavior or response should be used in specifying objective behavior. Beginning with a statement such as, "Upon the completion of this instruction, the learner will be able to ...." you have set the stage for BCS. By applying action verbs to this initial phrase, a specific behavioral action is indicated. Action verbs like list, state, construct, and assess are active and specific. By stating the conditions under which the behavioral change is to take place, the number of interpretations that can be made of the objective is narrowed down.

Conditions are those indications of environment (day-night, inside-outside) or attitude (clothed-naked, standing-sitting) which place limitations on the behavioral action.

By stating the standards for the objective, the field of interpretation is narrowed even further. Simple examples of standards might be: "....with 100 percent accuracy" or "four out of five times." Here is an example of a behaviorally stated objective: Upon completion of this instruction, the learner will be able to state whether it is night or day while standing outside. The learner will be able to accomplish this with 100 percent accuracy.

Frequently, conditions and standards are implied in the statement of an objective, but play it safe when you first begin to write behavioral objectives by stating the conditions and standards.

TESTING THE BEHAVIORAL OBJECTIVES

The main purpose of stating an objective in highly qualified terms is to avoid misinterpretation. An objective that is stated in vague terms like "knowing" or "understanding" (knowing or understanding what?) is likely to be interpreted clearly only by its author.

The professionals engaged in writing essays and instruction manuals on how to write essays and instructions have often made things less than clear by the use of jargon and the current "buzz words" of the trade. An effort can be made to dispel the fear and anxiety created by the ominous vocabulary surrounding PI and other self-paced individualized instruction. The margins contain definitions of the terms used in the manual. A few terms, relating to testing the objectives, are discussed here to remove some of the jargon stigmata. The buzz words "pre-test" and "post-test" refer to testing that takes place before (pre) or after (post) the learner has taken a lesson or program of instruction. The only innovation, but a significant one, is the pre-test. The significance of the pre-test is that it shows the learner what the objectives of the lesson or program are, exposes him to new capabilities he will acquire and indicates those areas for attention while taking the instruction.

Criterion measurement as defined by Mager is "a standard or test by which terminal behavior is evaluated." Simply, criterion measurement is a graded test before or after a change of behavior has taken place (pre/post-tests). The criterion measures are the objectives, and the objectives are the test! How about terminal behavior? Terminal (final) measured behavior is our old friend: the post-test. Terminal behavior in terms of an individual objective is the last question in a series or frame which calls for the performance of the objective by the learner.

TERMINAL BEHAVIOR: The behavior displayed by a learner on completion of a learning sequence or frame.

TAXONOMY

Taxonomy is another one of those words. When stated as "A Taxonomy of Behavioral Objectives," it sounds formidable indeed! A taxonomy should be no more frightening than a classification — in this instance, classification of types of behavioral objectives. Bloom, Krathwohl, and a committee of college and university examiners have established three taxonomies for educational objectives: one for observable behavioral objectives, one for affective types of behavioral objectives and one for psychomotor behaviors. The objectives in these taxonomies are set up in hierarchies of learning and establish boundaries for defining the various types of objectives and the level of difficulty in attaining those objectives.

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FRAME CONSTRUCTION

In PI, an item is usually referred to as a frame. This is the amount of material that a learner can effectively handle at one time. A frame may consist of a few words or several paragraphs. The common factor is that the frame contains one stimulus to elicit one response. When the response is made, confirmation (knowledge of results) is given to inform the learner of the correctness or incorrectness of his response.

During the development of frames for a program, the concept of lean programming should be kept in mind. This will help the frame analysis since learners (during developmental testing) indicate to the designer where the frames need additional material.

Individual item construction should lead from simple S-R pairs to complex frames that demand discriminations or problems to be solved at the terminal (objective frame) frame for each learning sequence. Susan Markle in "Good Frames and Bad" states, "... *(a good frame should*)* provide knowledge of results before the student proceeds to the next frame." The definition of "frame" or "item" should not be misunderstood to mean one film slide or one page, because a frame frequently consists of a number of slides, paragraphs or pages.

EVALUATION

Evaluation of programs in development should be based on the gathering of empirical (now there's a heart-stopper!) data. Empirical data is information gathered by experiment or observation. If the learner does not learn from the instruction, there is something wrong with the instruction. The data gathered from test results should enable the designer to beef up the instruction in those areas where the learner continuously encounters difficulty. Even the best designers encounter difficulty during the development of a learning program.

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*Editor's italics.

INSTRUCTIONAL UNITS AND MODULES

In a strict sense, modules of instruction are complete self-contained learning elements covering one or more objectives in a particular subject matter. Instructional modules form the molecular structure of a complete learning system. These modules can be in any medium or media. They may be considered to be the smallest parts of a system that can be removed for analysis and revision. A modular-constructed system in the form of lessons or programs lends itself to the continuous cycling of system revision without bringing the entire system to a halt for a complete overhaul. An instructional unit, by a glossary definition, can consist of a group of modules representing a complete component of instruction. A course of instruction covering an entire area of subject matter could consist of several instructional units.

LEARNING CARRELS

Learning carrels are self-study desks with panels on three sides to give the student relative privacy for study when they are arranged in clusters in a large study area. Learning carrels will be discussed and illustrated in Chapter Five when methods of instruction are explored.

RELATIVE LEARNING

An important aspect in Naval training is that all learning acquired by trainees should be in relation to the requirements of the job he will assume upon the successful completion of his training. Nice-to-know information is "nice to know," but may not be relevant to job requisites. Since all training is costly, the elimination of needless training is important. If an analysis of instructional material shows that some could be removed without impairment of the objectives, the program should be streamlined to get rid of the excess.

Often a student will ask, "Why do I have to know this stuff?" As an instructor, you might ask the same question from your vantage point — "Why does the student have to know this material?" Unless you, as instructor, can form a bridge between the student's need to know and the final application of this knowledge, the "stuff" is highly suspect. The learner should be kept aware of the relevance of his learning to what he will be able to do on his job.

KNOWLEDGE FACTOR LIST

At the end of a unit of instruction, an appendix which lists the factors the learner is responsible for may be included. These knowledge factor lists will help the learner in review of materials prior to testing. If the instructor informs the learner of these lists before the learner goes through the unit, they will afford the learner an aid to listening and note taking. The learner will be alerted to the primary points or objectives of the unit of instruction.

PQS (PERSONNEL QUALIFICATION STANDARD)

A specific definition of PQS may be found in the "Glossary of Navy Education and Training Terminology" (OPNAVINST 1500.39). It states, in part, that a PQS is an exact task analysis in learning objective form using a questionnaire format containing all of the questions that a trainee must be able to answer to prove he is qualified for a given rate. Both knowledge and performance are tested since the PQS is equipment oriented.

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In the systems approach to training and through the advancements in learning theory and practice, many instructional methods have been designed to stimulate learning. The learning goal establishes the parameters for the analyses of the content and processes involved. The testing and evaluation complete the system by verifying the validity of the approach. This is the description of a complete "closed-loop" system.

THE FUTURE IN LEARNING TECHNOLOGY

Learning technology has given the instructor a firmer grasp on the methods that might be employed to encourage and stimulate learning. Although much still remains to be discovered about how a student learns, great strides have been made. As a Navy instructor, you can make a contribution to the advancement of instructional technology and individual learning.

SELF TEST FOR CHAPTER THREE: THE SYSTEMS APPROACH TO TRAINING

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1. Define "systems engineering."

2. Describe how systems engineering relates to the systems approach to training.

3. Underline the elements below which would be appropriate for use in a self-paced instruction program:

   a. Training films.
   b. Lecture.
   c. Programmed texts.
   d. Field trips.
   e. Sound/slide programs.
   f. Simulations.
   g. Any learning device.
   h. Any training aid.
   i. Informational packages.
   j. Library books.

4. List the steps for designing Programmed Instruction.

5. Explain the processes involved in writing a programmed text.

6. The three components of a behavioral learning objective are behavior, conditions and standards. Define the following components of a behavioral learning objective:

   Behavior ______
   Conditions ______
   Standards ______

TEST PROBLEMS: CHAPTER THREE — THE SYSTEMS APPROACH TO TRAINING

1. You are having difficulty designing learning materials for an objective you have written. What could be the problem?

2. After an evaluation of frames you have designed and tested, it is found that the desired 90/90 has not been attained. What are you going to do now?

3. Review the section on programmed instruction. Write two behavioral learning objectives that could apply to all or part of the procedures involved in PI.

Course Design and Redesign

Chapter

4

Objectives

TRAINING OBJECTIVES

Upon completion of these subjects, the learner will be able to:

1. Develop and conduct classroom validation procedures.
2. Design a curriculum outline for given subject matter.

LEARNING OBJECTIVES

Upon completion of this chapter, the learner will be able (with 100 percent accuracy) to:

1. Select the measure of a good IG (Instructor Guide) from a given list.
2. Identify how the individual learner should be used during developmental testing.
3. Write a definition of feedback.
4. List the principles that should be adhered to when designing a lesson, IG, or curriculum.
5. Explain in writing how and under what conditions validation takes place.

Chapter Four

Course Design and Redesign

RELATING SYSTEMS TO LESSONS

The key word in applying systems engineering to course design is system. The system or method of approach to a given training problem must be established. Programmed Instruction, when properly and effectively designed, provides us with a perfect model of a system. All of the component parts of PI illustrate a closed-loop system providing for design, development, testing, evaluation and redesign as required. Each step in the development of PI is based on the examination of empirical data gathered from preceding steps in the system chain. This scientific method of lesson, course or program development, unlike many past development plans, does not base its creation on intuition or guess work, but on data which have been carefully analyzed and validated. This definition of a system and its application to Naval training at all levels of development shows the change in philosophy and the direction of future planning for learning throughout the Navy.

LESSON PLANNING (SUBJECT MATTER TO VALIDATION)

When you are assigned subject matter for a lesson or course, the first consideration should be that of defining a goal which the subject matter was designed to achieve. Once a goal has been defined, development of a plan for learning can begin. Following a systems model, this requires an analysis of those knowledges and skills that the learner must acquire from the lesson or course.

Next, training objectives are specified and pre- and post-test items are written to the objectives (with individual lessons these test questions may take the form of oral questioning). The number of liberties you take with the basic system design will directly affect the viability of the final lesson (whether it can be validated or not). The more you deviate from the systems model, the less certain the final product might be.

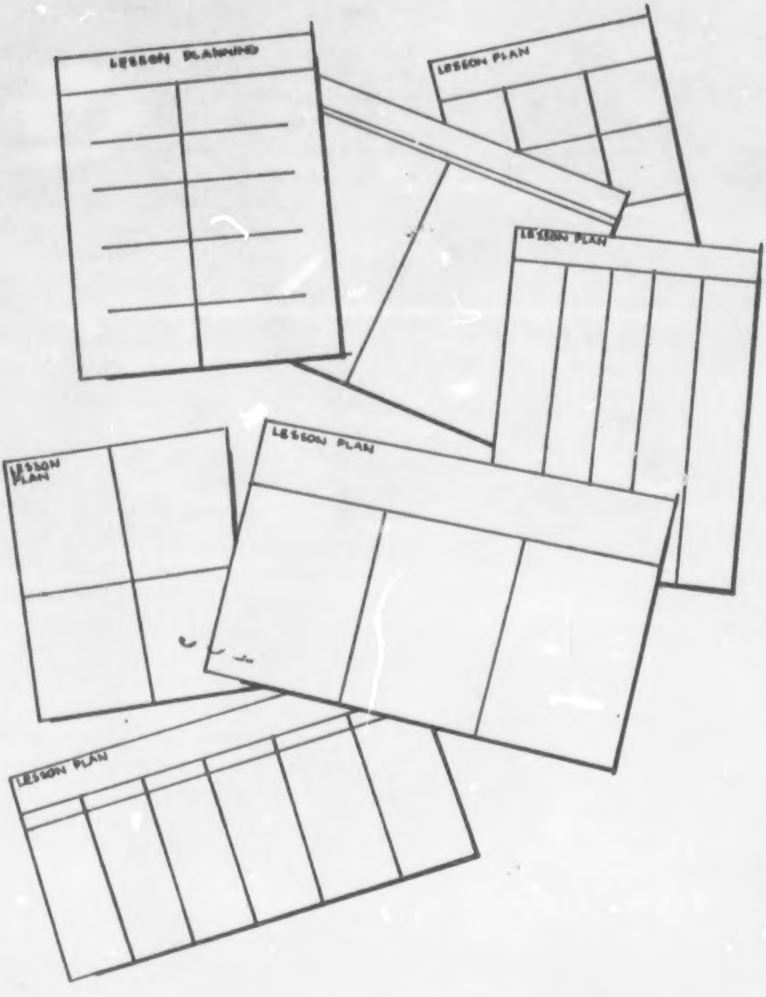
Different schools and commands subscribe to various lesson planning formats. Regardless of whether the format is vertical or horizontal, the systems approach should be applied even at the lesson level of development. The format is only a framework for the content.

A lesson outline to determine the best learning sequences for the objectives is the next consideration. As the lesson develops, testing with students from the target population will let you know how effective the chosen sequencing is working. If any sequence does not work, it is better to find it out at this point in development rather than after the lesson is completed. Construct other learning segments; test and revise them as necessary. These steps will ensure that when the lesson is completed it will work. Although it may take longer to construct a systems designed lesson, the results will be more positive and the need for remedial study, summaries, and review will be reduced.

FEEDBACK

If lessons are to be individualized, feedback or "knowledge of results" is an important aspect that is required. When a learner responds to a given stimulus, he is immediately given the results to his response in the form of an answer or discussion of the desired behavior. If the learner has made an incorrect response, feedback will correct his

LESSON PLANS


LESSON PLANNING
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Regardless of the format, lessons must consist of clearly stated learning objectives, job/task analyses, logically structured sequences and tests to the objectives.

error. He will either proceed with the lesson or branch off to a corrective situation and then return to the main lesson when he has mastered the correct response, obtaining positive reinforcement through feedback. In programmed instruction, you will remember, the response to each stimulus is followed by immediate feedback.

VALIDATION

Validation is the final step. In the case of a lesson, validation represents the success or failure (the first time you present this lesson to a class) of the instructional presentation. Validation can be called a full dress rehearsal prior to implementation of the lesson in an instructional system. During instructional validation, all preliminary work is completed (analyses, objectives, sequences, test design, developmental testing), and the curtain is ready to go up. Validation takes place with individuals or groups in the correct user environment (target population) under proper conditions. The pre-test is administered (if exact system procedure is followed). The instruction (PI or other method) is given to the learner(s). The post-test is given on completion of the instruction. A careful evaluation of test results to ensure that base line objectives have been met by *all* learners is required. If any weaknesses appear during the validation process, revision and subsequent tryouts are necessary since this is the last step; and the objectives must be attained or the system will not function. Chapter Seven discusses more about validation and testing procedures.

INSTRUCTOR GUIDES

An Instructors Guide (IG) contains all of the behavioral learning objectives for a given program or curriculum and includes the instructional and learning elements which are deemed necessary for the learner to achieve. In order to construct an IG, the instructor must be qualified in the design and development of self-paced individualized learning material. If the guide is constructed correctly, any other instructor can use the material contained in the guide to achieve close to the same results obtained in the validation on which the guide is based. By having IG's on all subject matter areas, duplication of instruction can be avoided, and future course changes to cover similar subject matter can be minimized. Standardization of training for given subject matter is also achieved. A new instructor for a given subject can be certain that the subject will be covered by the class if the IG is followed. He does not have to hunt around for source materials and instructional aids since they will be specified in the guide. A time table for completion of criterion items should be included as well as tests (pre-, and post-) and learner homework assignments. If the new instructor follows a well detailed IG, his learners will succeed.

CURRICULUM OUTLINES*

Curriculum outlines, if they follow the system design concept, will include the detailing required for IG's at the course level. Curricula will be set up with hour, day, and week requirements. As with the IG, curriculum outlines will follow the logical sequencing of learning events (based on testing and evaluation of the objectives); but the scope will be larger, encompassing an entire course of study. A curriculum outline could be thought of as a series of IG's sequenced to cover an entire branch of learning.

Lesson plans, Instructor Guides, and curriculum outlines have much in common when a systems approach is followed. They all are constructed, tested, and evaluated before being put in their final forms.

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*CNETINST 1550.3 of 19 November 1973: Design Standards for Curriculum Outlines and Instructor Guides

SELF TEST FOR CHAPTER FOUR: COURSE DESIGN AND REDESIGN

1. Select the measure of a good IG from the list below.

   a. Students learn from it.
   b. Any instructor can use it with the same results.
   c. It contains all types of objectives.
   d. It utilizes many different media.

2. During developmental testing, an individual learner should be used: (Select one).

   a. For the entire program.
   b. For each segment until it is perfected.
   c. Only once.
   d. At different points during development.

3. Feedback can be defined as immediate ______________ __ ______________.

4. The principles that should be adhered to when designing a lesson, IG or curriculum are those of ____________________ ____________________.

5. Explain how and under what conditions validation takes place.

____

____

____

TEST PROBLEMS FOR CHAPTER FOUR: COURSE DESIGN AND REDESIGN

1. During a classroom validation procedure, the class is interrupted by a twenty minute fire drill. There is no way you can avoid the interaction of the students. What will you do after the fire drill?

2. Several other instructors have used an IG that you designed for a given course. They have each had different results from those that you achieved when you administered the course. What can you surmise and what will you do next?

3. You have been assigned a course goal. How will you proceed to achieve this goal?

Methods of Instruction

Chapter 5

Objectives

TRAINING OBJECTIVES

Upon completion of these subjects, the learner will be able to:

1. **Design formats for various forms of instruction.**
2. **Design and execute a class session using one or more of the methods of instruction.**

LEARNING OBJECTIVES

Upon completion of this chapter, the learner will be able (with 100 percent accuracy) to:

1. **Complete a statement which describes the principle advantage of the tutorial method over other methods of instruction.**
2. **Write out the wording for the following acronyms: CAI, CMI, and IPI.**
3. **Describe the differences between CAI and CMI.**
4. **List three disadvantages of group-paced instruction when compared to self-paced instruction.**
5. **Describe in writing the positive attributes of field trips.**
6. **Identify the primary advantage of self-paced instruction.**
7. **Explain in writing how games and briefings may be used as methods of instruction.**
8. **Describe in writing the characteristics of responder systems and explain their use in the classroom.**

Chapter Five

Methods of Instruction

The following discussion of instructional methods covers conventional and innovative techniques being used in Naval training and education. Many of the methods that will be discussed are innovative while others evidence little or no change from conventional methods of presentation.

LECTURE METHOD

The lecture is still the most frequently used method of instruction. If an instructor utilizes a public speaking method of uninterrupted presentation not permitting oral questioning or interaction, the instruction can be ineffective, regardless of the instructor's skill as a speaker. By providing learners with lesson objectives before the lecture, the learner will be able to listen more effectively taking concise brief notes to the objectives rather than writing feverishly throughout the lecture. The use of pauses during the lecture for direct oral questioning creates interaction between instructor and learner. It is unfortunate when classes are large because it is impossible for the instructor to interact with all learners on each point. The lecture method has been questioned as to its learning effectiveness because of the lack of interaction; but it continues as a means of reaching a large group at one time with a condensed, tightly organized body of information. Keeping the logical systems steps in mind when writing a lecture will contribute to its instructional capability.

DEMONSTRATION METHOD

In a skill-type learning situation, the instructor may be able to demonstrate all of the steps in performance of a given task. If the exact physical procedures can be shown in a step-by-step manner, the instructor can carry out the job tasks involved and explain the reason and significance for each action in the series of steps. Unless the demonstration procedure is worked out ahead of time, the instructor, even though thoroughly familiar with the procedure, may leave out an important explanation or step. The proper sequence of procedure is usually important enough to be given careful consideration before the presentation.

If the demonstration is before a large group or the viewing is difficult because of the size of the equipment involved, the use of enlarged devices or training aids is recommended. It is desired, when practical, that the learner have the opportunity to repeat the procedure in a "hands on" practice session. This will reinforce the student's learning in an effective manner. Under instructor supervision, immediate correction of mistakes and the reinforcement of proper procedure tends to speed up learner achievement of the demonstration objective. The direct demonstration approach is a most effective method of instruction, especially when the learner has the opportunity to go through the procedures.

DISCUSSION METHOD

The discussion method breaks out into three basic modes: trainees discussing a subject with no direction from an instructor, an instructor-directed and -controlled discussion or a panel discussion between experts with or without trainee interaction. Discussion methods are effective in getting the learner to think constructively while interacting with his peer group. Discussions can be conducted with large or small groups. However, small groups are more desirable. If a group is extremely large, breaking up into smaller groups or teams with a discussion leader for each team is an effective method. A small group is more easily controlled and directed than larger groups of ten or more students. Discussions give learners the opportunity to observe, listen, and actively participate in completion of lesson or course objectives.

ORAL QUESTIONING

Oral questioning allows for some student interaction, but usually only one student at a time can respond to a given question. This points out an inherent weakness in the oral questioning technique. Limited interaction, of course, is better than none at all. The quantity and quality of the interaction can be controlled to a certain extent. If the instructor or group leader asks specific questions of different students without calling for volunteers, his sampling will give even slower or reticent students a chance to participate in the interaction. If only those students who raise their hands are called upon, the mastery of a few students allows the level of the lesson to move too rapidly, leaving behind the slower learners and those who did not have the right answers. This is not to say that your lessons should be geared to the slowest student in class, but random questioning gives even slow students a chance to keep up.

RESPONDER SYSTEMS

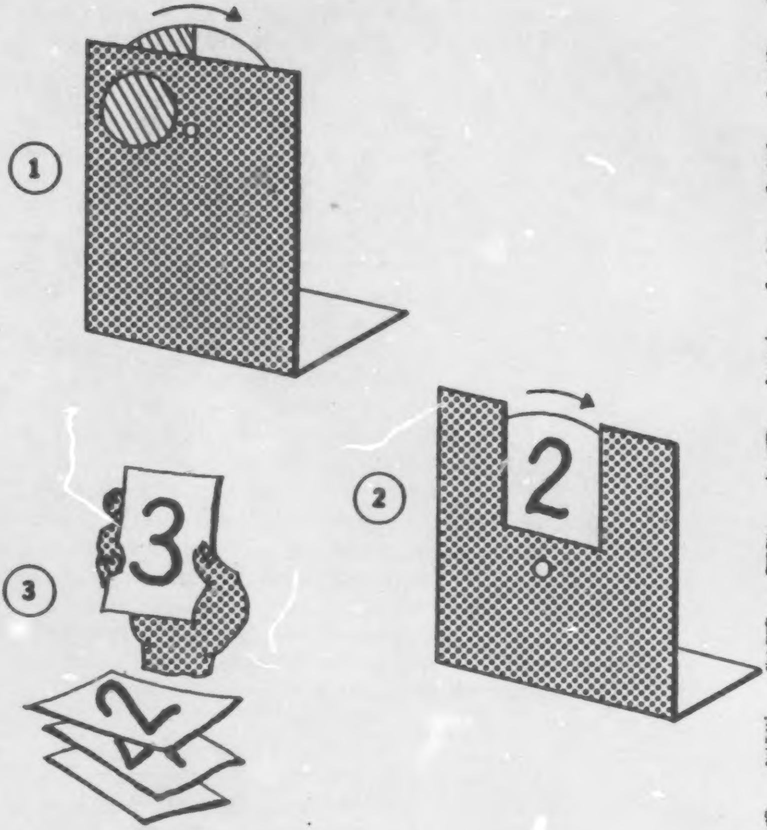
Since only one student at a time can respond orally to questions in a group-paced classroom environment, students may be provided with a responding device that is number- or color-coded. The individual student can indicate a personal answer to a multiple choice or true-false question posed by the instructor. The instructor, by visually scanning the classroom, can quickly determine how well all of the students have answered a given question. If these interactive questions are carefully constructed, any deviation from a correct answer can be quickly remedied by an adjunctive question or explanation to those students who have answered incorrectly. Many audio-visual and other media presentation modes have a responder system accessory available for multiple-choice discriminations. When a learner responds with the right answer, using one of these devices, the audio-visual program will continue. An incorrect answer does not activate the advance mechanism, and the learner will have to make another choice. With some of the more sophisticated systems, a wrong answer will put the learner on a branch from the main program. The learner will be returned to the main stream of the program when he has successfully completed the branch.

With a little ingenuity, an instructor can create his own responder system (similar to those in the illustration on page 66) to determine the progress of his class.

ROLE PLAYING

The role playing method of instruction can be effective in developing understanding (empathy) of one's role in a job environment with fellow workers or supervisors. Role playing consists of personnel assuming their own or another's role in a real or simulated work-social environment. Role playing allows the instructor to observe a student's conceptual understanding of how he relates to a group by requiring him to act out a role employing his attitudes, prejudices, philosophies and personality traits. This technique is particularly useful in learning such human relations skills as communication, interviewing, supervising, and counseling. Although 883

RESPONDERS



Classroom responder devices: (1) Color coded disc for multiple choice answers. (2) Numbered device. (3) Simplest responder: Numbered cards, which students raise in response to oral questions.

role playing is used mainly as a management method of evaluation, an instructor can gain insight into the value and judgment abilities of his students by its use.

TUTORIAL METHOD

In the Socratic method, tutoring was a one-to-one pupil-teacher relationship. Socrates, by indirect questioning, attempted to get his pupils to answer their own questions by logical reasoning. The able instructor can lead a student to a correct conclusion without supplying specific answers to questions. In supervision of learning, the instructor can lead the student to learning media choices best suited to the individual's learning attitudes and abilities. All forms of instruction are compromises of the tutorial method which is believed to be the most effective method of instruction. The compromises exist because of the impractical constraints involved with implementing a one-to-one tutor system.

CONFERENCE METHOD

A conference in the instructor's area of specialization is an effective way of up-dating his knowledge and keeping abreast of changes in technology. Topical speakers provide state-of-the-art perspectives which can be informative, but frequently just nice-to-know and not necessarily applicable perspectives to an instructor's specific job.

A conference between an instructor and one or more of his students might clear up difficulties of understanding, interaction, and other human factors. The one-instructor-to-one-student conference can easily evolve into a tutorial session. Conferences allow for interaction, as do discussion methods, except that conferences are usually less structured in that they often do not have a central theme at the outset.

SIMULATION METHOD

When costs or hazards are too great for on-the-job training, simulation methods can be used for training purposes. The closer the simulation (copy or imitation) is to the real job, the more effective the instruction. For example, the use of a link trainer can simulate all the conditions and attitudes of an airplane in flight without the hazard of crashing (through pilot error) that would exist using a real plane in flight. Frequently size is a factor. A classroom, after all, can only be so big. The transportability of some items prohibit their use in the classroom. If onsite training is impractical, a simulation or mock-up might be in order for training purposes.

FIELD TRIPS

Field trips in conjunction with simulation learning can enhance the trainee's learning and facilitate the transition to the actual job environment. Physical plant layouts, spatial relationships, actual job locations and the opportunity for observation of trained personnel performing the jobs that the trainee will assume upon completion of instruction provide the learner a valuable learning experience. Field trips can set the scene and heighten motivation toward course goals.

GAME PLAYING

The military has probably used "war games" as an effective training tool since before recorded history. In peaceful times, military preparedness is important for national security. War games help maintain this preparedness. Educators have been looking at games as an effective method of teaching decision-making skills for occupations where these types of skill are required. Games can reinforce decision-making skills by simulating the consequences of decisions. Popular games such as Monopoly® involve this decision-consequence experience. Games are being designed and used in classrooms for general and specific training experiences. Specialized games can give single or groups of learners an idea of the complexity of an environment and the importance their decisions might make on their relationships to that environment.

BRIEFING/ DEBRIEFING METHOD

In the military, prior to a mission a briefing procedure usually takes place. Although those who are participating in the mission are cognizant of the main purpose before the briefing, the meeting brings the details into sharp focus. The briefing takes place just prior to the execution of the mission. The leader of a briefing is called the informant. He outlines the requirements of and what is needed to achieve the mission. A discussion between the informant and the participants (much like a brainstorming technique) establishes the status of equipments, the sequence, and other elements to achieve as close to 100 percent of the mission as possible.

The purpose of de-briefing, which takes place on completion of the mission, is a review of the procedures used during the mission. What went right and what went wrong, if anything, is discussed. The questions posed by the informant ask what was learned from the mission, what could have been done better as well as what should and should not be done on future missions. Substituting "class assignment" for mission, it can be seen that the techniques of briefing-debriefing employ practical learning methods. They have been outlined here to show another application for instruction.

INDIVIDUALIZED INSTRUCTION (SELF/GROUP-PACED)

As has been stated previously, self-paced instruction is geared to the individual learner. The learner moves through the material at his own rate of learning. Even here, however, a reasonable pace must be maintained. If the individual learner falls too far behind the peer group in attaining the objectives, remedial measures may have to be taken. The self-paced nature of individualized instruction is flexible within reasonable time constraints. Time for the individual to complete a given module or unit of instruction can be stipulated as a condition when the objectives and curriculum are formulated. Group-paced instruction places a completely arbitrary time limit on learning segments. This time limit is frequently geared to the slowest learner in the group. Disinterest and boredom can be created among the average and fast learners. It would be best to establish a time limit geared to the average learners rather than the slow learners. Remedial materials may be needed for the slow learners. These adjunctive learning materials could consist of simple printed texts or audio tapes (if reading comprehension is a problem) which could be studied on the learner's own time. The faster learners could, as has been stated before, be given more challenging problems to solve during class study periods. CNET believes that most learning materials can be adapted to a self-paced individualized learning mode. Current and proposed development of learning programs throughout the Navy is moving in this direction.

Describing a few Few Acronyms of instruction

CMI CMI (Computer-Managed Instruction) uses a computer to prescribe the course of instruction, evaluate progress, and otherwise monitor the individual learner's pace through the course. The actual instruction takes place off-line (not contained in the computer) and may consist of conventional texts, self-paced programs, multi-media presentations or other instructional methods. CMI can help control the time spent in learning. By accelerated pacing and the elimination of redundant materials, many learners can cut time and therefore costs from their training. CMI can be implemented as a prelude to obtaining the more sophisticated computer systems required for CAI (Computer Aided Instruction) or can be used in conjunction with CAI.

CAI CAI (Computer-Aided [Assisted] Instruction), unlike CMI, uses the computer to administer various forms of PI to the individual on a one-to-one basis. As hardware technology improves, many media or multimedia programs can be designed for computer display. Even now, all types of audio-visual devices can be attached to the terminals of computers for display purposes. Although CAI costs are quite high, the Navy is employing CAI in some highly critical, specialized areas such as flight training for new aircraft.

IPI (Individually Prescribed Instruction) attempts to tailor the learning experience to the learner characteristics. Once the student's needs have been established, he is counseled and directed to a variety of learning experiences designed to aid him in accomplishing course objectives. The learner is monitored by an instructor or supervisor on completion of prescribed segments of instruction. **IPI**

Many of the methods of instruction covered in this chapter have been presented in a pure form. In actual practice, methods are often used in a combined form. A lecture might be a combination of lecture-demonstration-oral questioning and discussion. Combinations of instructional methods are primarily determined by the types of learning events required by specific conditions of learning and the individual instructor's preference.

Most of the methods of instruction discussed in this chapter can be made effective if the instructional program is consistent with the systems approach to design. The training in instructional techniques at Navy Instructor Training Schools is now employing systems approach methodology. Systems methodology is being stressed as an important approach to instructional design because its effect can be empirically validated.

SELF TEST FOR CHAPTER FIVE: METHODS OF INSTRUCTION

1. The principle advantage of the tutorial method of instruction is a ________ to ________ relationship between ________________ and ________________.

2. Write out the following acronyms.

   a. CAI ____.
   b. CMI ____.
   c. IPI ____.

3. Describe the differences between CAI and CMI. ________________________

   ____

   ____.

4. List three disadvantages of group-paced instruction when compared to self-paced instruction.

   a. ____.
   b. ____.
   c. ____.

5. Describe the positive attributes of field trips. ________________________

   ____

   ____

6. Which of the following is the primary advantage of self-paced instruction:

   a. It can use many different media.
   b. Students progress at their own rate.
   c. A rigid time schedule can be adhered to during administration.
   d. Each learner can select his own subject matter.

7. Explain how games and briefings may be used as methods of instruction.

   ____

   ____.

8. Describe the characteristics of responder systems and explain their use in the classroom. ____

   ____

TEST PROBLEMS FOR CHAPTER FIVE: METHODS OF INSTRUCTION

1. Several of your students are having trouble with their reading assignments. To keep these students up to speed with the rest of the class, what will you recommend?

2. During a discussion period after a lecture which you have just given, most of your class is confused by the subject matter. How can you improve their understanding in a future class?

3. You have instituted a classroom responder system so that the learners can all respond to your oral questioning. After a discussion and demonstration, you begin to ask questions. Only about half of the class is coming up with the right answers. What does this tell you?

Media

Chapter

6

Objectives

TRAINING OBJECTIVES

Upon completion of these subjects, the learner will be able to:

1. Provide learning specifications for programs utilizing various media.
2. Design visualizations for PI in text or audio-visual form.

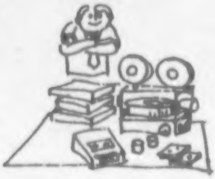
LEARNING OBJECTIVES

Upon completion of this chapter, the learner will be able (with 100 percent accuracy) to:

1. Identify an accurate description of audio-visual.
2. Distinguish media presentation modes.
3. Define multi-media.
4. Explain the difference, in writing, between a microfilm and a microfiche reader.
5. Compare descriptive statements and identify the best reason why proper learning environments are important.
6. Explain the difference between a wet and a dry carrel.

Chapter Six

Media



MEDIA

Media is the plural of medium. A medium in the communication sense is a form of presentation. A book is a medium presenting communication or information in a printed form. A movie is a medium of presentation. A sound movie is a medium, but actually could be called media since it is composed of two mediums — sound and motion pictures. When you hear the expression, "I read (or heard) it in the media," or, "The mass media says...," the term media encompasses all the main forms of information presentation — radio, television, newspapers and mass circulation magazines. Media is, then, more than one medium, but can refer to a few, or used generically, can refer to all forms of communication combined.

AUDIO-VISUAL TECHNIQUES

The term audio-visual may be defined as any of the many combined forms of presentation using aural (audio) and visual modes. A sound (audiotape or disc recording)/slide (usually 35mm) program or a sound/filmstrip (basically the same as a sound/slide program, but the picture presentation method differs and can utilize different film sizes depending upon the hardware being used) is an example of an audio-visual presentation. New hardware (the machine or machines used to present a program) is being developed constantly. This equipment offers modifications for

HARDWARE: Any device used as a vehicle for the transmission or presentation of learning materials (the manual uses hardware in reference to audio-visual equipment).

ease of presentation, compactness, and automated features. A glance at the advertisements in any audio-visual publication will show you the many hardware devices, each claiming to be the "one" you should use, and their different modes of presentation. Since selection standards are different, compatibility with equipment in use or proposed for use, available production methods, and costs are important.

Television and, recently, video tape or video tape cassettes for playback have come into use in the Navy. A large catalog of sound motion pictures for training and information has been available since World War II.

TRAINING AIDS AND EQUIPMENT

A training aid or device is any item used in a training situation to illustrate or demonstrate a thing, process, or concept about which students are required to acquire knowledge or which is used to create a situation or environment where the learner (through practice) may learn, develop, maintain, or improve skills and techniques.

Training aids include charts, transparencies for overhead projection, displays, mock-ups, 35mm slides, audio tapes, training and informational films, drawings, and other materials for classroom use. Naval Education and Training Support Centers or Detachments have transparency, slide, and film catalogs of training aids that are available. These Centers also have audio-visual equipment for loan purposes to shore bases and supply and repair equipment for the fleet.

The audio-visual media discussed thus far are designed primarily for group use. The emphasis in Naval training is changing from group-paced to self-paced individualized instruction. Although there will always be times and places for group presentations, more software (the designed instruction) is being developed for individual use. PI, combining step-by-step instruction with interaction, would require audiovisual hardware which the individual learner can adjust and control for his own pace of learning.

SOFTWARE: The designed learning materials tailored to particular media or modes of presentation.

MULTI-MEDIA

The expression "multi-media" as it applies to audio-visual programming could refer to a sound-slide program with a workbook (literally, multi-media means more than two media). However, multi-media frequently is applied to multiple image and sound presentations utilizing a number of projectors, screens, and sound sources.

DEVELOPMENT OF PI IN INDIVIDUALIZED LEARNING SYSTEMS

Programmed instruction was originally designed in printed text form to be used in what was called a "teaching machine." *Teaching machine* is one of those unfortunate labels that has caused misunderstanding in the field of education and training. The connotation has been that the teaching machine replaces the need for a teacher. Instead, it can only facilitate learning through presentation. These machines presented learning materials to learners in small steps or increments; advancing to the next increment when a learner has successfully completed the last step. Consequently, the programmed text (without the machine) was the primary form of programmed instruction most familiar to educators in the 1960's and early 1970's. To afford the learner alternative methods of instruction, the Navy has been testing different audiovisual modes of presentation. The Naval Instructional Technology Development Center (NITDC) in San Diego, California, is currently employing and testing innovations in instructional technology for self-paced individualized instructional use. These materials and methods will have applications for shipboard training and general use throughout the Navy.

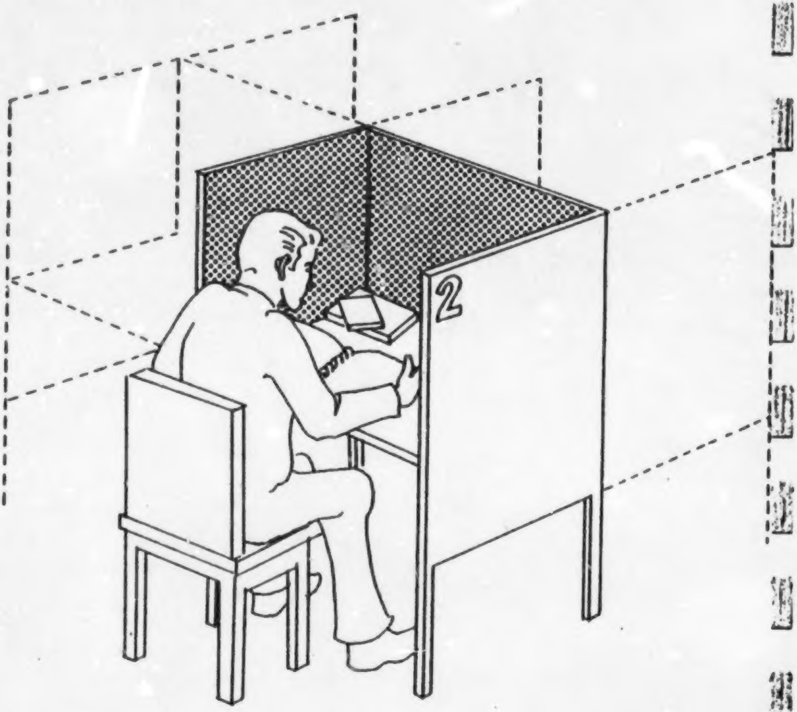
STUDY CARRELS (WET AND DRY)

As individualization of training in the Navy continues, the classroom is taking on a new shape. In many classrooms the large lecture space is being replaced with study carrels. A study or learning carrel is a desk enclosed on three sides and designed for a single student's use. Depending on the size of the classroom, twenty or more of these carrels can be set up.

There are two types of carrels in use — the dry carrel and the wet carrel. The "dry" carrel is designed for private study and consists only of a desk surrounded on three sides for privacy. The "wet" carrel is designed for self-paced instruction utilizing any of the available hardware manufactured for individual use.

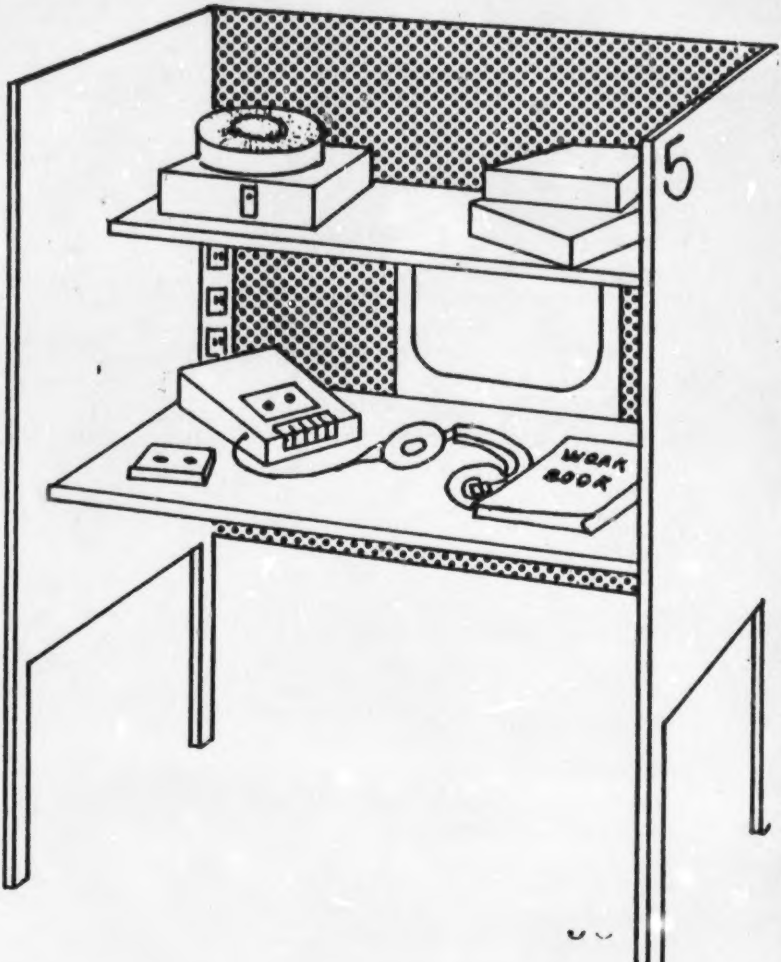
The "wet" carrel can be simple (set up for an individual sound/slide presentation) or complex (wired for closed-circuit TV, dial-access media or a computer terminal for CAI). Most of the "wet" carrels in Navy use, at this time, are simple in nature. They are primarily composed for a single method of presentation. The Naval Post Graduate School at Monterey, California, has study carrels in its library for individualized television and audio playback. Television and audio programs can be called up (a telephone dial is installed in each carrel) by the dial access method. This system at the NPG School was one of the first of its type to reach an operational status.

DRY CARREL



Individualized learning space: "Dry" study carrel. These units can be set up in clusters for self-study learning. Dry carrels consist of a desk space surrounded on three sides for individual privacy that is relatively distraction free.

WET CARREL



Individualized learning space: "Wet" study/learning carrel. These units can be clustered for self-paced individualized learning. They can be equipped with many types of audio-visual hardware. This example is supplied with a tape recorder, slide projector, rear projection screen, and earphones for private listening.

ENVIRONMENT FOR INSTRUCTION

Environment for instruction must take human values into consideration. A classroom that is too bright, too warm, or too cold does not encourage learning. These elements of the environment must be watched and corrected when necessary. Any factor that you can apply Murphy's Law to in the classroom should be guarded against (Murphy's Law: If something has a tendency to foul up, it probably will).

Media considerations for the classroom are also important. The right projector, the proper screen, and an adequate sound system must be provided for adequate learning to take place. The lettering on a training aid must be of a size that the student in the back row can read it. The visuals or illustrations must be simple and uncluttered, containing only the information vital to the instruction. The elimination of "nice-to-know" information applies to the visual as well as the verbal.

VIDEO, CCTV, AND VIDEO CASSETTES

Video originally described only the picture part of television (audio described the sound), but now the word video is used synonymously in reference to television. When you refer to a video program, you mean a television program. CCTV is the acronym for closed-circuit television. Closed-circuit television is a system where only TV sets connected to a studio by coaxial cable or equipped with coded receiving devices can receive the broadcasted programs. CCTV has been used extensively by the Navy in the last decade for the presentation of prerecorded and simultaneous broadcasts to classrooms and aboard ships. However, only a small amount of software has been developed exclusively for the purpose of CCTV. Navy CCTV has been used to screen scheduled training films and live briefings or orientation lectures.

Little effort has been expended to prepare programs specifically for the television mode. CCTV lends itself to programs designed for small groups by utilizing demonstration and lecture techniques. The television teacher-instructor technique of presentation has been used to some extent; but unless the instructor has been trained to perform in front of a camera, the results have been dismal at best.

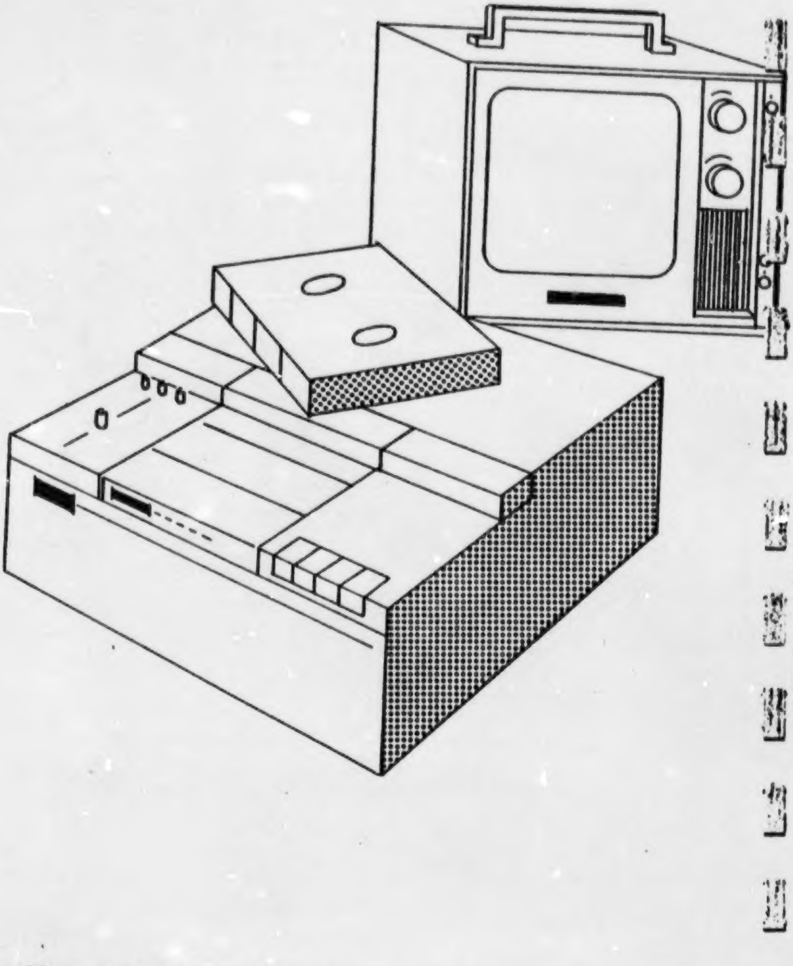
The advent of the video cassette has opened the area of viewer flexibility to the point that self-paced individualized television is possible. If the learner had access to a learning carrel equipped with a video cassette playback unit, he could view a video programmed cassette at his own pace. The cost of the hardware is a primary obstacle to the introduction of more video cassette playback units. Color video program units are still priced out of the general market, and the cost of acquiring these units is prohibitive.

MICROFILM AND MICROFICHE

Another medium that may be considered is the microfilm or microfiche reader. Newspaper morgues (libraries) and technical libraries have been using microfilm reading devices for over twenty years. The microfilm reader consists of a visual projection screen for individual viewing and filmstrips of printed material that can be viewed one or two pages at a time. Newspapers found these devices an easy way of storing, in a small space, the enormous bulk of years of daily newspapers.

The microfiche reader has miniaturized the storage of information even more. A microfiche is a single film sheet (approximately three by five inches) containing 64- or more page images which can be read back on a device that the individual could hold on his lap. A microdot (the dot of an "i" would

VIDEO CASSETTE PLAYBACK UNIT



The video cassette allows for the individualization of television by allowing the learner to control the presentation.

contain many pages of information) reader, currently under development, could put the entire Library of Congress Collection into a small three- by five-inch card file on top of a desk. The entire Encyclopedia Brittanica could be contained on one microdot fiche!

The application of film readers to Naval training could find wide usage where storage and retrieval of information and learning is a problem. Whole libraries could be stored in a relatively small space.

MEDIA ALTERNATIVES IN SELF-PACED INDIVIDUALIZED INSTRUCTION

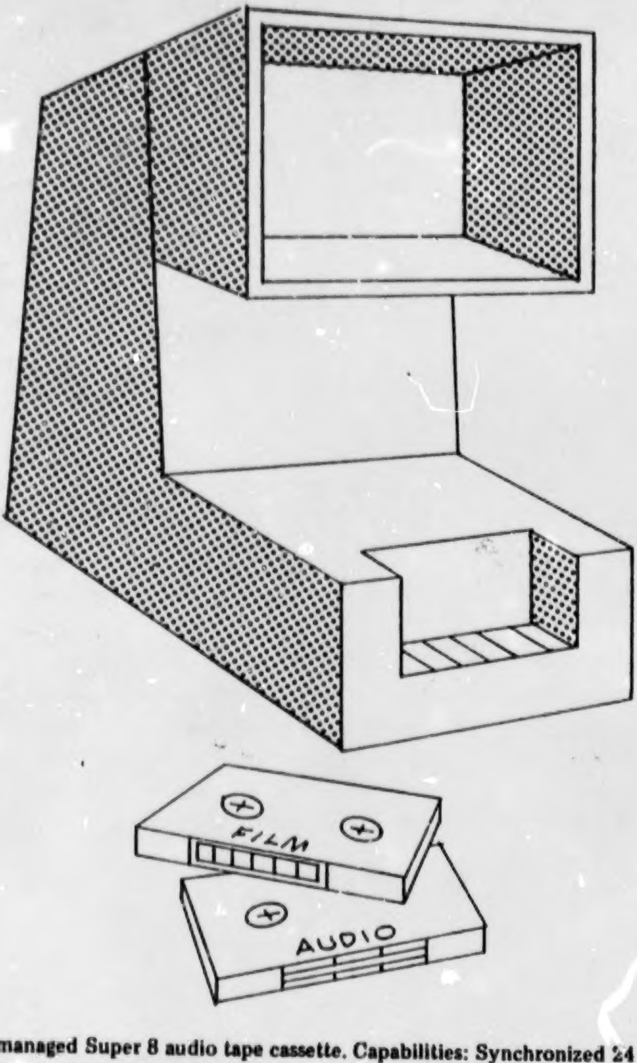
Hardware, as has been stated, is the vast array of available audio and visual projection and sound equipment. The advertising an educator is bombarded by in the trade publications telling of the wonderful capabilities of dozens of brand name pieces of gear can be confusing and exasperating for a newcomer to the audio-visual field. Before falling in love with a shiny light-blinking piece of equipment with a guarantee and an imposing price tag, a careful analysis of your needs should be undertaken. If you have been involved with the design and development of text-type PI, you have a good idea of the cost for program development. You may have been considering alternative routes because your target population contains slow readers who have difficulty learning from the written text, the capabilities of your students vary, or the subject matter lends itself to audio-visual media. Maybe you simply wish to use audiovisual materials to heighten the learning experience using a bimodal presentation medium. Regardless of the reason chosen, you have selected a route filled with promise. Beware! For many instructors, the road to media capability has been paved with dusty, unused pieces of light-blinking equipment emotionally selected in haste and regretted at leisure. Before you proceed further, take a look at what you have to program (*never* start by buying hardware and then think of how or what to put in it!). For all its developmental and testing complexity, the programmed linear or intrinsic scrambled text is deceptively simple — not simple in terms of construction, but simple in terms of student use. For a piece of hardware to duplicate the physical manipulations that a student can be directed to do with paper and pencil (page turning, skipping to other parts of the text, pacing himself, pausing for writing or thinking, etc.), it must be a relatively complex machine.

Armed with this information, consider what the machine must do. If the audio-visual device were for straight information presentation, a movie or slide projector would be an adequate device. If you add sound, the price and complexity goes up. A sound movie projector or an audio tape recorder with an extra silent pulse track (on the audio tape) to advance slides in a slide projector is required. This sound/slide presentation method is more sophisticated than having the operator advance the slides on hearing an audio pulse signal on the sound track. The devices just mentioned are relatively uncomplicated compared to those that would be needed to duplicate all the learner actions used with the paper and pencil programmed text.

The audio-visual hardware industry has been busy perfecting devices with add-on features to fill consumer demands. Most of the add-on features are still in development to meet the requirements of different prospective buyers. The variety of choices is numerous, and the standards between equipments are slow in being established since each manufacturer feels his unit should be the standard for the industry. This is understandable from the manufacturer's point of view, but it is no help to you if the standard changes or the manufacturer discontinues the line. Remember, advertising promises or sales presentations do not in themselves guarantee validated results.

Consider now the physical motions of the learner using a programmed text. First, he must be able to read the directions and the program. An audio tape could replace this function. Secondly, he must observe the visuals (if they are to be used). A slide projector can be used here. If motion is required, a movie projector can be added for these sequences. The third step involves the learner's need to turn the pages. A pulsing device can be added between the tape recorder and the projector to advance from one visual sequence to the next. Fourth, since PI texts are self-paced individualized instruction, the learner will have to be able to pause, think, and then answer questions. An additional audio pulse of a different frequency will have to be added-on to the audio tape to stop or pause the visual display. This add-on feature has been incorporated in many audiovisual equipments and is called a stop pulse. Fifth, the learner may wish to review earlier segments in the text. Now being manufactured is a sound/filmstrip unit that is capable of rewind in synchronization. The equipment has met with some success but is limited because of audio pulse complications during rewind. Rewind is not a problem with a magnetic or optical sound film or a video tape unit, since the picture and sound are recorded one-on-one.

TAPE-MANAGED VISUAL



Tape-managed Super 8 audio tape cassette. Capabilities: Synchronized 24 frames per second and single frame advance with continuous audio, stop pulse. (Tape managed: The visual portion motion or single frame capability is controlled by silent pulses on the audio tape.)

These then are but five basic considerations in determining what your hardware must do. There are some audio-visual units that are capable of performing all of the above tasks, but the specialized production capabilities to produce programs for these units are still expensive, complicated, and not readily available.

Production of software and cost limitations have not been discussed. If you are planning to invest in costly equipment, a steady flow of learning materials must be designed, developed and programmed for the hardware; or the shiny light-blinking machines you purchase will become more litter on the road to instructional effectiveness through media capability.

SUMMARY

The conclusions that can be made in relation to your selection of media for learning takes the iceberg example to task again. The largest part of the iceberg is involved with careful planning and a thorough systems design of the learning elements before media can be properly considered. After the system is outlined, ask the media questions: What must the media be capable of doing? Is there an easier or less expensive method that will achieve the same results?

SELF TEST FOR CHAPTER SIX: MEDIA

1. From the list below, identify the definition of audio-visual.

   a. Multi-media.
   b. Movie.
   c. Sound and picture mode.
   d. Sound projector.

2. Which (one) of the following media lists contain only audio-visual modes of presentation?

   a. Slide projector, sound film projector and a flip chart.
   b. Sound-slide projector, Super 8mm projector and an audio tape.
   c. Audio-tape flip chart, sound-slide projector and a 16mm optical sound projector.
   d. Illustrated [illegible], Super 8mm magnetic sound projector and an audio-tape table-top easel flip chart.

3. Define multi-media. ______________________________

   ____

   ______________________________.

4. Explain the difference between a microfilm and a microfiche reader.

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   ______________________________.

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5. Identify the statement that best describes the reason why proper learning environments are important.

    a. They insure attendance.
    b. They impress VIP's.
    c. They affect learning.
    d. They do not encourage cheating.

6. Explain the difference between a wet and dry carrel.

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TEST PROBLEMS FOR CHAPTER SIX: MEDIA

1. You have been assigned to develop a self-paced learning course. You would like to use some audio-visual programmed materials but your budget is somewhat limited. What would be an economical way to design and implement an audio-visual program?

2. A tape recorder and a slide projector have been put at your disposal. What are some simple things you might do to utilize this equipment?

3. You have been assigned to make a media presentation. Adequate funds are available for almost any kind of presentation. What type of presentation would you pick and why?

Measurement and Evaluation

Chapter

7

Objectives

TRAINING OBJECTIVE

Upon completion of these subjects, the learner will be able to:

1. Design, administer and evaluate criterion-referenced tests.

LEARNING OBJECTIVES

Upon completion of this chapter, the learner will be able (with 100 percent accuracy) to:

1. Explain the difference between norm-referenced and criterion-referenced measurement.
2. Draw a bell shaped curve and describe its use in norm-referenced measurement and evaluation.
3. Identify from a list of descriptors the one that best describes developmental testing.
4. Summarize in writing how validation closes the loop in the systems approach to training.
5. List two reasons why essay examinations are an excellent form for criterion-referenced measurement.
6. Describe in writing how task analysis contributes to test construction.

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Chapter Seven

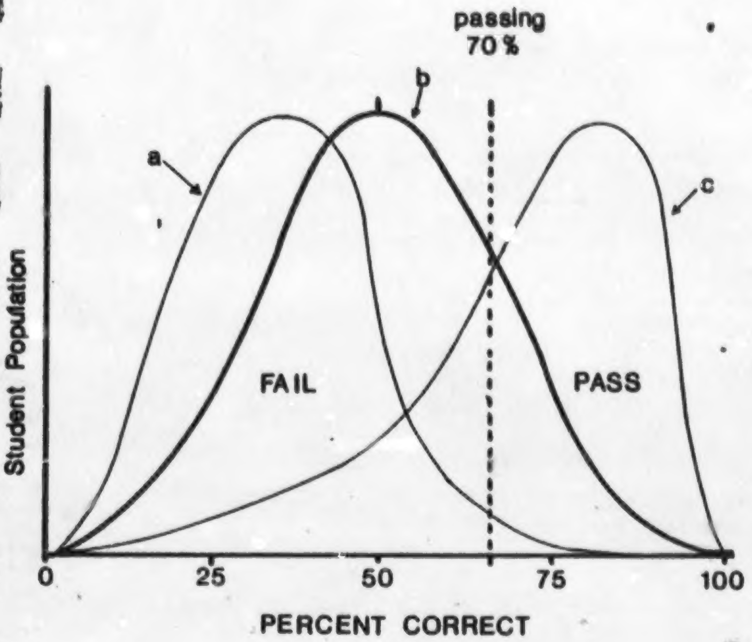
Measurement and Evaluation

NORM-REFERENCED MEASUREMENT

Norm-referenced measurement has been the prevailing testing system used in education. This system of testing is based on measuring students against each other rather than against the objectives of training. By testing relative comparison between students, the evaluator is never sure that the trainee is capable of performing the objectives of the instruction. He is only aware that one student is more apt to be capable of the job performance than one who has scored lower on the curve. The "bell shaped" curve is the standard for norm-referenced measurement. On the curve, the lowest scoring students are at one end; the majority or mean are at the top of the bell (curve); and the highest scoring students are on the other end of the curve. On the curve, the instructor or evaluator can establish a cutoff point where all those above a certain point on the curve will pass and those below that point fail. That some will fail using norm-referenced measurement is assured unless the cutoff point is well below the norm.

Norm-referenced tests can be useful measurement devices in that the score of a particular student can be compared with scores of students in another Naval District, students in the same locality, and students in the same school. Frequently, norm-referenced tests are constructed to make the instruction and the instructor look good at

Norm-Referenced Bell-Shaped Curves



Bell-shaped curves are used to evaluate student score distribution. With seventy percent as a passing grade, the curves represent: (a) Poor learning or instruction. (b) Similar result; more fail than pass. (c) Better learning or instruction, but many still fail. Some solutions to the problem: (1) Make passing grade a lower percentile. (2) Improve instruction or make tests easier. (3) Employ systems approach and use criterion-referenced measurement.

the expense of the student's learning. The implication, here, is that the instructor may be trying to get by with feeble learning materials rather than attempting to improve his instructional materials and methods.

TRACKING BASED ON NORM-REFERENCED TESTING

Tracking based on norm-referenced testing is another method of ensuring failures. Tracking, in this sense, consists of putting learners in peer groups according to their tested ability. By putting the poorer students in group A, the average learner in Group B, and the smarter students in Group C, a caste system is established.

Any caste system lowers the morale of those in the lowest group since they retain the stigma of "dummies" throughout their career. Although tracking has been used from time to time, it has been discarded as a wasteful system that ensures failure of some learners.

Neither norm-referenced measurement or tracking fit in the systems approach to training because they do not allow for an adequate validation process to complete the systems loop.

CRITERION REFERENCED MEASUREMENT

In the systems approach, behavioral learning objectives for particular subject matter are constructed. These objectives form a positive basis for the design of criterion-referenced measurement. The expression, "The objectives are the test," is near the mark. Three things are accomplished by giving the learner a set of learning objectives he will be held accountable for at the end of a program or course. As was stated in Chapter Three, behavioral learning objectives contain BCS or three parts: B is a statement of behavior that is expected upon completion of the objective: C is the condition or conditions under which this behavior is to take place; and S is the standard or degree of accuracy that must be attained in performance of the behavior specified by the objective. BCS gives the learner a road map of his responsibilities at the beginning of instruction and affords him with a guide to what he will be tested on at the completion of instruction.

Although, in criterion-referenced measurement, the test may take different forms, the learner can be tested only on the objectives. You can not teach apples and test for oranges! If the test you construct covers all the base-line objectives, a true measure of learning on completion of instruction is guaranteed. With criterion-referenced measurement, not one learner needs to fail!

The individual learner is no longer measured against other learners but against his own performance in relation to a given set of goals or objectives. You might say, if you have used norm-referenced testing and scored on the curve, that the concept of criterion-referenced measurement is revolutionary. Prediction and outline of this method of measurement was done by E.L. Thorndike in 1913!

The ability of the trainee to competently perform the duties for which he is being trained is demanded by the Navy. This is the main reason criterion-referenced measurement is replacing norm-referenced measurement in Navy Schools.

TEST DESIGN

Test design for norm- or criterion-referenced measurement depends on what it is you wish to measure. Your test can be capable of measuring differences or similarities between learners. Tests can be designed to cover one objective or a series of objectives. Tests can be administered before, during or upon completion of instruction. Since behavioral learning objectives are fundamental to effective instructional design, criterion-referenced testing is a requirement. If you are involved with lesson or course design and have a viable set of learning objectives, your test must be written to interface with those objectives.

ESSAY EXAMINATIONS

Essay or exposition type of examinations are well suited for criterion-referenced measurement and should be used primarily when the objective is to encourage the student to organize and integrate his ideas and to evaluate his success. The learner is given a relatively free rein in answering essay questions. The learner can express, in his own words, his understanding and achievement of the objectives. Unless the essay answers are kept short by the nature of the question or an imposed time limit, grading is time consuming for the evaluator and immediate feedback to the learners is impossible. However, the essay test is a good method for measuring learner comprehension of specific objectives. Multiple choice, true-false, matching and fill-in-the-blank types of testing, while easier to grade than essay tests, may not be suitable for criterion-referenced measurement unless the objectives are written to require those types of responses. If the learning objectives are designed to call for a multiple choice answer, they must be stated in that form. The self-tests in this manual employ some questions which use this technique.

SAMPLING AND OTHER TEST FORMS

It must be remembered, however, the validity of the system depends on the evaluation of course objectives; and the more accurate the measuring device, the more valid the entire system.

FIELD TESTING

Either real or simulated field testing may be the only way to test performance capability in relation to skill or job training. Certainly, no one would be able to ride a bike, swim, or fly an airplane by merely reading about it and completing a written examination on the subject. On-the-job training and on-the-job testing would be required. This is true in most skill and performance training. Performance testing in the real world with actual equipments and tools of the job is best; but simulated conditions early in the training may have to be used due to expense, danger, or other impracticalities.

FORMATIVE EVALUATION

Application of the systems approach in the development of training requires processes of formative evaluation (developmental testing) during the design of instruction, pre-tests and post-tests to demonstrate the validity and reliability of the instruction. Formative evaluation is a systematic procedure used during the process of curriculum course or lesson development that uncovers weaknesses in the instruction and dictates the need for major or minor changes. During the development of instruction if the empirical data indicate distinct weaknesses, all required revisions are made. Once an instructional project is completed, change is difficult to achieve. Cost of major revisions is also a deterrent to change. As has been stated before, if the objectives no longer apply or validation breaks down, the instruction must be changed to ensure that the objectives are met.

SELF TEST FOR CHAPTER SEVEN: MEASUREMENT AND EVALUATION

1. Explain the difference between norm- and criterion-referenced measurement.

2. Draw a bell-shaped curve and describe its use in norm-referenced measurement and evaluation.

3. From the list below, select the best description of developmental testing.

   a. Sequence validating.
   b. Site testing
   c. Formative evaluation.
   d. Media validation.

4. Summarize how validation closes the loop in the systems approach to training.

5. List two reasons why essay examinations are an excellent form for criterion-referenced measurement.

a. ______________________________.

b. ______________________________.

6. Describe how task analysis contributes to test construction.

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TEST PROBLEMS FOR CHAPTER SEVEN: MEASUREMENT AND EVALUATION

1. During a validation evaluation, it is discovered that an 80/70 performance level has been achieved by the test group. Since a 90/80 performance level is required, what are the steps you will take?

2. Several questions on a criterion-referenced test that you have written consistently yield the wrong response from learners, although other questions dealing with the same objectives have brought correct responses. What might the problem be? How will you rectify the situation?

3. Using a norm-referenced test to validate a programmed lesson, you have developed a normal bell curve in response to the test. A 90/80 validation is desired. What might you do to achieve a 90/80?

Instructional Support

Chapter

8

Objectives

TRAINING OBJECTIVES

Upon completion of this subject, the learner will be able to:

1. Make sound instructional judgments and identify the relevant sources and Commands to bring about changes in instruction when necessary.

LEARNING OBJECTIVES

Upon completion of this chapter, the learner will be able (with 100 percent accuracy) to:

1. Distinguish between statements that best describe a Course Curriculum Model Manager (CCMM) from those that do not.
2. Distinguish as either true or false statements that describe the procedure for an instructor evaluation.
3. Explain the purpose of an academic board.
4. List the three Command groups that are primarily responsible for the management of programs.
5. Write a definition of formal schools.
6. Write definitions for the following terms: set-back, attrition, exemption.
7. Write four environmental considerations to be made about classrooms or other learning locations.

Chapter Eight

Instructional Support

COURSE CURRICULUM MODEL MANAGER (CCMM)

When a new curriculum is to be developed for a group of schools, one school is usually selected to coordinate and develop the master curriculum for all the schools that will use the curriculum. Other schools contribute or participate in the selection of materials and the development of sections, but one school is selected as the Course Curriculum Model Manager (CCMM). Upon completion of the curriculum design, the curriculum is sent to Chief of Naval Education and Training (CNET) and subordinate Commands for review and approval.

MANAGEMENT OF PROGRAMS

The development of the Navy's systems approach to training is largely the responsibility of the Chief of Naval Education and Training, Naval Air Training Command, the Chief of Naval Education and Training Support, and Chief of Naval Technical Training staffs. The development of individual programs, courses, and curricula will go to lead schools to be aided by their local or regional support groups as specified by CNET.

Pioneering efforts in the development of the Navy's systems approach to training were put together by the Naval Air Training Command. At the present time, they have individualized more than seventy percent of their training.

The management of the system and the notification of Command of the need for revision or addition of new courses or materials will be the responsibility of the user school or the individual instructor. The individual instructor will be able to feed back comments and criticism on any part of the system in a manner similar to that used with PMS (Preventive Maintenance System) for shipboard maintenance reporting. It will also be the responsibility of the user school to train their instructors in the use and administration of PI and other self-paced individualized instruction contained in the system.

FORMAL SCHOOLS

Traditionally, the Navy has maintained formal schools for training in all rates. These schools are located at various bases around the country. Formal schools are rated as Class "A," Class "B,"*and (the most advanced) Class "C" Schools. The class distinction indicates the degree of advanced difficulty or specialization for the individual school.

Correspondence schools, increasing use of self-study programs, shipboard training, and curricula from many colleges and universities are expanding the formal learning area beyond the four walls of the formal Navy school classroom. This expansion will continue. Formal schools will become consolidated. Rather than two or more formal schools existing to teach the same rate, one school, strategically located, will become the rule. This makes sense economically and serves to ensure the standardization of instruction.

*Ed.Note: Class "B" Schools have been discontinued since the above was written.

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EVALUATION AND ASSESSMENT OF INSTRUCTORS

The responsibility for evaluation and assessment of an individual instructor lies with the supervisor or trained technician. His job as program or instruction evaluator brings him in contact with the individual instructor. Many of the duties and responsibilities of the Navy instructor were discussed in Chapter One. Evaluation and assessment should not be looked on as a form of spying or criticism in the negative sense but as a positive action to help improve the instructor's position and the effectiveness of his instructional skills. Self-assessment is good as far as it goes, but often being too close to the forest can be a handicap.

The Chief of Naval Technical Training has published a guide (CNTECHTRAINST 1540.12, 24 January 1973) for the evaluation and assessment of instructors. Every instructor should read this guide because it spells out, in detail, the objectives for evaluation. If the individual instructor uses the guide and analyzes his performance in a critical fashion, the possibility of a 4.0 rating is greatly enhanced. Since the student should be given the learning objectives before the instruction begins, why should not the instructor be given the same opportunity?

ADMINISTRATIVE DUTIES

The portfolio of a Navy instructor must include a number of administrative functions to measure the skills and abilities of his students and himself. Testing and evaluation results are necessary. Progress reports on individual students will help when the time for individual counseling rolls around. A complete folder of lesson plans and educational learning objectives is also a necessary item. Charts that can be used for system analysis should be kept on each student. These charts can show when and where learning takes place and will also indicate first line appearances of weaknesses in a course or system.

In reporting any breakdown in the system to a higher Command, be specific. Indicate the curriculum, learning module, and particular objective in question. This is required to make an analysis and remedy the learning problem.

It is important that a timetable be kept on all students to determine time savings in the different areas of subject matter. If the time frame for any area is out of line, the learning materials should be reevaluated. As more self-paced learning materials are produced for instructional use in the Navy, the administrative functions of the individual instructor will become more important. The instructor's personal involvement with and the guidance given to individual learners will be the key to the success of the overall system.

CURRICULAR VALIDITY AND REVIEW

Periodically, the validity of courses in a given curriculum must be reviewed. If adequate records have been kept, this review will be simplified. Any changes in the achievement of criterion objectives should be carefully analyzed. If any of the criterion items have slipped below the accepted level of accomplishment, analysis and redesign will be necessary. Perhaps the environment or hardware employed in the self-paced individualized instruction should be altered or changed.

A faltering in the achievement of base-line objectives should be a red flag that something is wrong. It could be related to any stage or change in the systems design but is more apt to be found in the vicinity of the instruction for a few base-line objectives.

PREDICTIONS OF STUDENT PERFORMANCE

Once a program or course has been validated, prediction of student performance and accomplishment of the base-line objectives can be reliably predicted because the empirical data collected during the validation process has demonstrated that the instruction works with learners of a specified entry level and target population.

ATTRITION

Attrition or drop-out was once a very significant part of the overall picture in training. When norm-referenced measurement of training results was used, attrition was almost always guaranteed for a certain percentage of learners. Those who fell below a set percentage were either sent back to repeat a course or sent to a school with a lower entry level with, perhaps, a less desirable rate for the student. Scoring on the curve makes certain that some will fail. However, when criterion-referenced measurement is used for testing and validation, there need be no failures. Only those learners with insurmountable personal or emotional problems are victims if course prerequisites are met. Criterion-referenced testing can ensure success for the learner. The main difference between norm- and criterion-referenced measurement is that with the norm-referenced test the instructor's success is primary; whereas, with the criterion-referenced test, learner success is paramount.

Learning materials must be more carefully prepared to ensure learning. Effective testing and grading methods may be complex and time consuming. However, if large numbers of learners are given the same instruction over a long period of time, as with most Navy schools, the money and time saved will be substantial.

SET-BACK

If, despite using criterion-referenced measurement, a student is not making the grade but shows potential in a chosen area, he is often put back or "set-back" a week or more in a program to give him the opportunity to catch up or relearn material with which he is having difficulty. Usually he will make it on the second run through because repeat learning situations produce a higher incidence of completion or retention, especially when the material is difficult and/or requires practice and drill.

ACADEMIC BOARDS

Decisions for set-back or failure are made by faculty committees or academic boards after a thorough review of the learner's past performance and his general and psychological test scores. The academic boards are composed of a chairman and from three to six members established within a training activity. The board's primary purpose is to interview individual students for accelerated training, elimination of training, or an extension of training.

EXEMPTION

Under certain conditions where previous training or experience permits and test results indicate that a trainee is capable of performing a job, the additional training indicated in the PQS is waived. In these cases, the instruction is said to be exempted. Usually the specific situation calls for the exemption of only portions of the required training. Avoidance of duplication of training is often accomplished in this manner. This shows the ultimate value inherent in pre-testing of learners and the use of academic boards.

OJT (ON-THE-JOB-TRAINING

Where training is possible on a job site, it should be encouraged because this type of training is the most direct training a learner can receive. Besides being the proper environment, the tools and materials required to do the job usually are available.

When an OJT (on-the-job training) session is set up, it is important that the demonstration or OJT practice follow the correct job sequences and procedures. Any variations from correct procedures will be strongly reinforced upon the learner (the law of primacy). Retraining is difficult because of the strong impressions made on the learner in the original OJT demonstration.

OJT (by SECNAVINST Glossary definition) "....connotes training in the performance of a task or duty while engaged in its performance as part of daily operational and maintenance tasks." This is the strict Navy definition. All other Navy connotations should be classified under "on-board" training.

SHIPBOARD/ ON-BOARD TRAINING

Shipboard training is the training of individuals aboard ship. On-board training is a general term applying to all forms of training provided to personnel in technical, military, and duty assignment areas. On-board training provides the learner with opportunities for advancement and improvement upon acquired skills. The training may be formal or informal to meet the learning requirements.

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FACILITIES

Only in recent years has the physical environment for learning been given the attention it deserves. A recapitulation of environmental factors discussed in Chapter Six (Media) will show that the same basic considerations you were asked to make about learning environments are being made by CNET learning specialists.

Factors to consider when designing or arranging learning environments:

1. Number of students for size of room or lecture hall.
2. Proper lighting.
3. Correct temperature and ventilation.
4. Correct audio-visual equipment (right lens and screen size) and sound system.
5. Appropriate graphics and devices.
6. Proper training aid dimensions for easy viewing from the back of the class.
7. Removal of any distracting equipment or materials left from other classes or subject matter.

These factors are interrelated, and all affect an environment for learning. Publications and catalogs on training aids and audio-visual hardware contain charts and guides for equipment size and placement in relation to classroom dimensions and number of students. In many instances, controlling all the factors mentioned is difficult if not impossible; but the more that can be satisfied, the better the environment. Naval training facilities on the drawing board are taking a hard look at proper environments for learning. Conversions of classrooms for study carrel areas are also being designed with attention to details to avoid environmental distractions. The variety of new programs and instructional support at all levels of Naval training are concentrating upon consolidation of facilities and standardization of instruction. It is planned that the end result will be a more practical, efficient, and functional Naval training effort.

SELF TEST FOR CHAPTER EIGHT: INSTRUCTIONAL SUPPORT

1. Which (one) of the following best describes a Course Curriculum Model Manager (CCMM)?

   a. A top-notch systems oriented school.
   b. A lead school for development of new curricula.
   c. A school where all learners score above the 90 percentile level.
   d. An instructors school for C School level of instruction.

2. (True/False) An instructor evaluation is carried out on a one-to-one basis.

3. What is the purpose of an academic board?

4. List the three command groups that are primarily responsible for the management of programs.

   a.
   b.
   c.

5. Write a definition for formal schools.

6. Define the following terms:

   a. Set-back
   b. Attrition
   c. Exemption

7. What are four environmental considerations to be made about classrooms or other learning locations?

   a.
   b.
   c.
   d.

TEST PROBLEMS FOR CHAPTER EIGHT: INSTRUCTIONAL SUPPORT

1. As collateral duty, you have been assigned shipboard training duty. There are about thirty students assigned to your class. Because of duty assignments, they are not all available for class at the same time. What are the alternatives open to you?

2. Several sections of a self-paced individualized instruction course that you are administering require updating and in one case an error is present. What are the things that you, as an instructor, can do to remedy this problem?

CHAPTER NINE

PUTTING IT TOGETHER

Chapter Nine

Putting it Together

THINK SYSTEM

The ability to THINK SYSTEM, whether you are writing, designing, or platform lecturing, is the message of this manual. How do you THINK SYSTEM? Consider again the elements that make up a system. Each element contributes to the whole.

As stated in Chapter Four, programmed instruction, when properly and effectively designed, provides a perfect model of a system. The parts which make up PI illustrate a closed-loop system providing for design, development, testing, evaluation, and redesign as required. If you are in the process of preparing a lesson or an entire curriculum, thinking in terms of a system will help during development and simplify evaluation of the learning materials.

ASSUMING NEW ROLES

New roles for Navy instructors will make more demands, but the rewards will also be greater. Regardless of the role that you assume as a Navy instructor, you will be part of the revolutionary change occurring in Naval education and training.

LEARNING AND THE LEARNER

More sophisticated ships and equipment demand a more highly skilled and trained Navy man. It will be your responsibility to train him. By considering the human values of the individual learner and providing him with sound learning materials, the learner and the Navy are best served. The individual's achievement of learning goals will motivate him toward job capability and self-esteem. You will provide the learning materials and the motivational incentives for the learner to achieve his goals. The job for you and your fellow instructors is not easy, but it is necessary to maintain a superior Navy that is a ready and able defense force.

LEARNING IS EASY WHEN YOU KNOW HOW

Emphasis on the learner's learning and not the instructor's teaching is not a new concept, but forms a tenet for the success of an instructional system. To motivate the learner, he must be given the ground rules of the systems approach. Once the learner knows his responsibility (to achieve lesson or course learning objectives) is told how to use objectives to facilitate learning and that the instructor is there to help rather than to trick or trip him, the learner may achieve at a pace that will amaze even him.

IMPROVEMENT THROUGH SYSTEMS APPLICATIONS

Application of the systems approach in the development of learning materials adds viability to all the supplemental elements that support the materials. Lesson plans, instructor guides, and curricula are enhanced by systematic structure and validation. Self-paced individualized instruction, while making learning easier, frees the instructor from many of the repetitive teaching chores related to conventional instruction. Criterion-referenced measurement (made possible by system structure) supplies a positive measure of learner performance against explicit learning objectives rather than against other learners. Some of the system principles of PI can be applied to conventional methods of instruction. Conventional methods, when based on clearly stated behavioral learning objectives, are more easily tested and validated. The objectives form the base for the learning and the testing!

SEE-HEAR-LEARN

Much of the data regarding the use of various media for learning indicates that audio-visual techniques, when properly employed, can improve learning effectiveness. Programmed learning can be adapted to audio-visual hardware when the funds and production facilities are available. The media alternatives discussed in Chapter Six state that media decisions should be carefully analyzed before selecting specific equipment or modes for instruction.

INSTRUCTIONAL SUPPORT

The thrust of the Naval education and training effort, as outlined by the Chief of Naval Education and Training (CNET), is to implement the systems approach to training. Your training as part of this instructional team will prepare you to become an effective professional in one of the most important and demanding roles in the Navy. The importance of training Navy personnel was clearly indicated when the Chief of Naval Operations (CNO) formed the line authority of CNET in 1971.

Armed with the knowledge that instructional support comes to the instructor from the highest echelons of the Navy, you can see that the instructor will play a pivotal role in the future of Naval education and training.

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